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BRITISH BIRDS

AN ILLUSTRATED MAGAZINE DEVOTED
TO THE BIRDS ON THE BRITISH LIST

EDITED BY

H. F. WITHERBY F.Z.S. M.B.O.U.

ASSISTED BY

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PREFACE.

THANKS to our numerous contributors, the contents of this seventh volume of *BRITISH BIRDS* is as varied, and, we believe, as interesting and valuable as that of any which have preceded it.

Perhaps the most noteworthy "events" recorded in the volume have been the discovery of a breeding-colony of Roseate Terns in Ireland, the nesting of Kites in England, the appearance of a bird new to Britain—the Dusky Warbler—and the incursion of Waxwings.

There have been many valuable articles and notes on breeding, courting, and other habits; and in this connexion we may here give special thanks to those who have enlivened our pages with photographs. Detailed information has been afforded regarding the plumages of several species, and points hitherto obscure have been explained.

Geographical distribution has been by no means neglected. Not only have our contributors provided valuable articles collecting and bringing up-to-date the information concerning certain areas, but also numerous notes—all helping towards a more exact knowledge of distribution and some effecting a considerable change in the previously-known status of the birds concerned.

Interest in the Ringing Scheme increases year by year, and we have no hesitation in stating that the results published in this volume alone are ample compensation for all the labour expended. By means of ringing we are gradually accumulating facts which, as isolated facts, are perhaps of little value and even in some cases misleading, but when sufficiently numerous to form a sure foundation, will be the means of solving many problems at present obscure.

THE EDITORS.

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BRITISH BIRDS

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THE ECLIPSE-PLUMAGE OF THE CAPERCAILLIE.

WITH A NOTE ON THE CAPERCAILLIES IN THE
PENNANT COLLECTION.

BY

W. R. OGILVIE-GRANT.

THE difficulty of obtaining game-birds during the nesting-season and when they are undergoing their autumn-moult, has caused several interesting seasonal changes of plumage to be overlooked until comparatively recent years. Thus, it was not until the summer of 1912 when, through the kindness of the Marquess of Breadalbane, I received several male Capercaillies in full moult, that I was able to show that this species, like the Blackcock,



a. Eclipse-plumage on sides of the head and neck.
b. Winter-plumage on sides of the head and neck.

assumes an eclipse-plumage in July and August. At that season the sides of the head and neck are covered with *short* blackish feathers mottled with pale sandy-brown (fig. *a*) and the chin and throat are clad in worn old black feathers devoid of green gloss and mingled with shorter more rounded eclipse-feathers slightly speckled with grey. On the sides of the

head and neck, a few of the long pointed feathers of the breeding-plumage (fig. *b*) are usually retained and are very conspicuous among the short eclipse-feathers. The latter differ so little in general tint from the feathers of the winter- and breeding-plumage, which are grey mottled with black, that it is difficult to see what advantage the bird derives from the change. Possibly it is the survival of an ancient plumage worn by the ancestral stock, before the long pointed ornamental feathers on the sides of the head and throat had been developed in the modern bird. The eclipse-plumage of the Capercaillie was first

described in *British Game-Birds and Wildfowl*, page 12, to which work I contributed the articles on Natural History.*

NOTE ON CAPERCAILLIES IN THE PENNANT COLLECTION.

While writing on the Capercaillie it may interest the readers of *BRITISH BIRDS* to learn that among the birds of the "Pennant Collection," recently presented by the Earl of Denbigh to the Natural History Museum, there was a case containing a fine pair of Capercaillies. These are almost certainly the originals of the figures given in Pennant's *British Zoology*, p. 84, pls. M and M* (1766). He says, in a footnote to his description, that he is obliged to Gesner and Willughby for the measurements and weights of these birds, having seen only dried specimens of them. In *A Tour in Scotland*, 1769, Appendix, pp. 278-9, pls. xv. and xvi., fig. II. (1771), the same birds are again figured, the female in this instance having the neck stretched out as in the mounted specimen in Pennant's Collection. In *British Zoology*, pl. M*, the head has been turned round over the bird's back, evidently with a view to getting it into the plate.

In the octavo edition of *British Zoology*, p. 349 (1812), Pennant writes: "In our country I have seen one specimen, a male, killed in the woods of Mr. Chisolme, to the north of Inverness. About the year 1760, a few were to be seen about Thomas-town, in the county of Tipperary, but I suspect that the breed is now extinct in every part of Ireland."

It is quite possible that the birds in the Pennant Collection are of Scottish origin: if so they are the only examples of the old British race of Capercaillie known to exist at the present time. Unfortunately there seems to be no means of proving this interesting point, as the case contained no data whatsoever. The Pennant Capercaillies do not seem to differ in any way from Scandinavian specimens.

* *British Game-Birds and Wildfowl*. The London and Counties Press Association, Ltd., 1912.

THE CASE OF THE LAND-RAIL.

AN INQUIRY PROPOSED.

BY

N. F. TICEHURST.

Now that the inquiry on the frequently reported increases or decreases of certain of our summer-visitors has been fairly launched, and the machinery is prepared for the collection of facts with a view to ascertaining the amount and possible causes of their fluctuating numbers, the time would seem to be ripe to undertake a similar inquiry with regard to another species, the Land-Rail (*Crex crex*).

Reports have appeared for years past in various papers and journals of the scarcity of this bird in isolated districts, but they seem to have attracted little attention until the Migration Committee of the British Ornithologists' Club issued its first report in 1906. In this it was stated that: "It seems an undoubted fact that during this year (1905) this species was scarce in the Eastern and South-eastern counties." Even then the statement was received with scepticism by one or two critics; but in spite of the ever-increasing number of observers at the Committee's command, and the consequently larger area of country reported upon, their first conclusion has been amply justified. As time has gone on the condition thus indicated has been shown to be a chronic one, and taking into consideration the previously published notes and what has been published since, there cannot be any doubt that a decrease was then and probably had been for some, or many, years going on in the number of Land-Rails that breed in the south-east of England.

Moreover there are indications that the decrease is still in progress and that the area affected is not now confined to the south-east, but that there is at any rate a tendency to diminution in all the neighbouring areas.

It would seem as though the distribution of the species was gradually shifting towards the north-west and thereby becoming sporadic along its south-eastern margin. This last of course is only an idea suggested by the perusal of successive reports, but whether it be anything like the truth or not, it seems manifest that the already ascertained facts are sufficient to warrant a searching inquiry.

The subject is an important and interesting one from a distributional, if not from an economic point of view, and it would be especially interesting to determine the cause or causes of the decrease, and whether it is associated generally or locally in these islands with anything like a compensatory increase. Before this can be attempted a preliminary inquiry must necessarily be made in order to collect facts from as wide an area and in as great detail within that area as is possible, and in the meantime to collect all the hitherto published statements bearing on the subject. Then by collating and working out the results a solid basis of fact will be arrived at from which a start may be made to ascertain the causes.

When the inquiry now in progress was being formulated, it was recognized that the Land-Rail formed a special case by itself, for the following reasons: (1) a decrease in the abstract was already proved for a considerable area; (2) the decrease had been going on for a long time; (3) many of the details were already known to many people, and they only wanted systematically collecting and collating. Observations during the coming season were thus of minor importance in this species as compared with those enumerated in the schedule. It was clear therefore that the same form would hardly fit the two cases, and that of the Land-Rail merited a special inquiry of its own.

During 1911 a certain amount of correspondence on this subject took place in the pages of the *Zoologist*. The subject was started by Mr. Steele Elliott, but less than a dozen people were induced by his inquiries to

relate their experiences. Unless people have something startling or unique to record, many hesitate to write a letter on an ordinary subject to a zoological journal; and if they did so on such a subject as the present one in sufficient numbers to make their contributions of real value, space could hardly be found for them and the work of collating would be colossal. It seems therefore that a united and carefully organized inquiry is the only method likely to meet with success, and that this should take the form of a schedule containing a number of specific questions to which answers can be given as briefly as possible, and that will at the same time bring out the important facts. *With this intention such a schedule has been prepared and is issued with this number*, and we would ask our readers to answer the questions to the best of their ability and to obtain answers as well, on separate copies of the schedule (which will be supplied on application), from as many people as they can in neighbouring or distant localities who they think would be able to supply any information bearing on the question. In the case of such a species as the Land-Rail, an inquiry of this character is not of interest to ornithologists alone but should appeal to the larger class of sportsmen in general, and is one which they, though they may not all be possessed of expert ornithological knowledge, would be perfectly well able to advance by recording their answers to the questions asked.

Above all things it is necessary to note that information with regard to birds on passage in spring and autumn, or the numbers shot in the latter season, is *not* what is required, but the inquiry is entirely limited to the presence or absence, past or present—and the relative numbers and changes in numbers—*of breeding birds* in each district.

THE NOMENCLATURE-RESOLUTION AT THE NINTH INTERNATIONAL CONGRESS OF ZOOLOGY.

THE subject of Zoological Nomenclature played an important part in the proceedings of the Ninth International Congress of Zoology, which took place in April at Monaco.

We are extremely glad to note that those who are opposed to the rigid application of the principle of priority turned up in force to discuss the matter at the Congress. This must surely portend a wide acceptance of the principle that the Rules of Nomenclature must be controlled by a central international authority if uniformity is to be attained.

It is for recognition of this principle that we have contended, and we hope and believe that the resolution passed at the Congress will have the effect of drawing more adherents to the International Commission. The wording of this resolution which we take from *Nature* (April 17th, 1913, p. 165) was as follows :—

“That plenary power is herewith conferred upon the international commission in zoological nomenclature acting for this congress to suspend the *règles* as applied to any given case, where in its judgment the strict application of the *règles* will clearly result in greater confusion than uniformity, *provided*, however, that not less than one year's notice shall be given in any two or more of the following publications, namely, *Bulletin de la Société Zoologique de France*, *Monitor Zoologica*, *Nature*, *Science* (N.Y.), and *Zoologischer Anzeiger*, that a question of the possible suspension of the *règle* as applied to such cases is under consideration, thereby making it possible for zoologists, particularly specialists in the group in question, to present arguments for and against the suspension under consideration ; and *provided* also that the veto of the commission is unanimously in favour of suspension if not less than two-thirds be present. The commission is hereby instructed to report the facts to the next succeeding international congress.”—
It was also resolved : “That this congress fully approves of the plan that has been inaugurated by the commission of conferring with special committees from the special groups involved in any given case, and that it authorises and instructs the commission to continue and extend their policy.”

Nature remarks : “ Altogether, the conclusions arrived at appear thoroughly satisfactory, especially as the plenary

power of the commission is very adequately safeguarded ” ; and with this opinion we are in agreement. The effect of the resolution may be that in due time two or three of the names in our *Hand-List* will have to be altered, but it cannot affect more than a *very few names*, and it is necessary in every case that the decision of the Commission should be unanimous. In any case it is clearly our duty to abide absolutely by the *Rules* until those *Rules* are suspended in a specific case by the International Commission, and until the Commission gives its authority for the use of another name in such case. If only everyone would agree to a like course of action instead of thrusting their individual opinions upon us, uniformity would soon be reached.

We are very glad to know that the impossible and altogether impracticable proposals of the German Zoological Society were vetoed, and that the resolution finally passed protects the law of priority so efficiently that it cannot be suspended in any case without the authority of the Commission.

THE EDITORS.

RECOVERY OF MARKED BIRDS.

THE following have kindly sent in subscriptions towards the expenses of the Marking Scheme since the last acknowledgment was made: The Duke of Buccleuch, Messrs. C. F. Archibald, A. Bankes, R. O. Blyth, A. W. Boyd, E. A. Eason, Jnr., H. S. Greg, Dr. P. Gosse, Miss M. Logan Home, Messrs. T. C. Hobbs, D. Sibbering Jones, A. Mayall, Dr. H. J. Moon, Mr. N. H. Noble, The North London Natural History Society, Miss A. Pease, Messrs. E. Page, B. Pickard. H. L. Popham, and J. K. Stanford.

STARLINGS (*Sturnus v. vulgaris*)—B.B., No. 16754, marked by Mr. W. E. Suggitt at Cleethorpes, Lincolnshire, on July 26th, 1912, as an immature bird. Recovered at the same place on December 3rd, 1912. Reported by Mr. R. Harper.

B.B., No. 16797, marked as No. 16754 on August 24th, 1912. Recovered at Grimsby, Lincolnshire, on March 10th, 1913. Reported by Mr. W. Funnell.

B.B., No. 16803, marked as No. 16754 on August 26th, 1912. Recovered at Grimsby on January 17th, 1913. Reported by Mr. T. W. Tuck.

B.B., No. 19537, marked as No. 16754 on October 24th, 1912. Recovered at Grimsby on February 20th, 1913. Reported by Mr. E. W. Thompson.

B.B., No. 19151, marked by Dr. N. F. Ticehurst at Huntbourne, Tenterden, Kent, on May 18th, 1912, as a fledgling. Recovered (caught building nest in an apple-tree) at Headcorn, near Ashford, Kent, on April 29th, 1913. Reported by Mr. C. Chambers.

B.B., No. 19205, marked as No. 19151, as a nestling. Recovered in a Tawny Owl's nest at the same place on May 4th, 1913, fresh but partly eaten.

B.B., No. 19236, marked as No. 19151, on June 6th, 1912, as an adult female incubating in box H. Recovered at the same place, on May 4th, 1913, while incubating in Box Q. Ring replaced.

B.B., No. 13296, marked as No. 19151, on May 26th, 1911, as a nestling in box 60. Recovered as an adult female on May 4th, 1913, while incubating eggs in box P. Ring replaced.

B.B., No. 7109, marked as No. 19151, on May 20th, 1911, as an adult female incubating in box 57. Recovered at the same place on May 4th, 1913, while incubating in the same box. Ring replaced (*cf.* Vol. VI., p. 338, for previous recoveries!).

B.B., No. 15050, marked by Mr. A. Bankes at Salisbury, Wilts, on August 2nd, 1911, as an adult. Recovered at the same place on November 25th, 1912. Had apparently been dead six or eight weeks. Reported by Miss E. Gordon.

GREENFINCHES (*Chloris ch. chloris*).—B.B., No. H122, marked by Mr. W. E. Suggitt at Cleethorpes, Lincolnshire, on January 27th, 1912, as an adult. Recovered at Grimsby on February 17th, 1913. Reported by Mr. W. Brace.

B.B., No. H234, marked by Mr. M. Portal at High Sandhoe, Hexham, Northumberland, on February 22nd, 1912. Recovered at the same place on March 4th, 1913.

B.B., No. L35, marked by Mr. J. Bartholomew at Torrance, near Glasgow, on May 24th, 1912, as a nestling. Recovered at Milngavie, about five miles from Glasgow, on January 13th, 1913. Reported by Mr. J. McCorrishen in *Cage Birds*.

BULLFINCHES (*Pyrrhula p. pileata*).—B.B., No. D834, marked by Captain W. Mackenzie at Dalmore, Alness, Ross-shire, on June 4th, 1911, as a nestling. Recovered at Lochussie, near Strathpeffer, in January, 1913. Reported by Mr. J. McLeod in *Cage Birds*.
B.B., No. N145, marked by Messrs. Stanford at Aldringham, Suffolk, on August 22nd, 1912, as a young one. Recovered at the same place on March 7th, 1913.

YELLOW BUNTINGS (*Emberiza c. citrinella*).—B.B., Nos. H264 and H276, marked by Mr. M. Portal at High Sandhoe, Hexham, Northumberland, on January 7th and 8th, 1912. Recovered two miles away between February 3rd and 10th, 1913.
B.B., No. D435, marked by Dr. N. F. Ticehurst at Huntbourne, Tenterden, Kent, on May 31st, 1912, as a nestling. Recovered on April 17th, 1913, at Martins, Tenterden, Kent. Reported by Mr. E. Skelding.

PIED WAGTAIL (*Motacilla a. lugubris*).—B.B., No. M545, marked by Dr. H. J. Moon at The Fylde, Lancashire, on July 3rd, 1912, as a nestling. Recovered at Singleton, Lancashire, on April 28th, 1913. Reported in the *Daily Mail*.

GREAT TIT (*Parus major newtoni*).—B.B., No. H370, marked by Mr. M. Portal at High Sandhoe, Hexham, Northumberland, on December 13th, 1911. Recovered at the same place on May 10th, 1913.

BLUE TITS (*Parus cæruleus obscurus*).—B.B., No. B477, marked by the North London Natural History Society at Woodford Green, Essex, on December 11th, 1910. Recovered at the same place on December 29th, 1912. Released after being ringed again.

B.B., No. B479, marked as No. B477 on December 19th, 1910. Recovered at the same place on December 15th, 1912. Released after being ringed again.

B.B., No. B747, marked as No. B477 at Hale End, Essex, on January 5th, 1911. Recovered at Woodford, Essex, on November 22nd, 1912. Reported by Mr. R. M. Presland in *Cage Birds*.

B.B., No. B728, marked as No. B477 on May 28th, 1911, as a nestling. Recovered at the same place on November 9th, 1912.

WILLOW-WARBLER (*Phylloscopus t. trochilus*).—B.B., No. J619, marked by Mr. T. F. Greenwood on June 15th, 1912, at Hebden Bridge, Yorkshire, as a nestling. Recovered at the same place on May 4th, 1913. Reported by Mr. F. Greenwood.

MISTLE-THRUSH (*Turdus v. viscivorus*).—B.B., No. 13644, marked by Mr. H. W. Ford-Lindsay at Pett, Sussex, on May 5th, 1912, as a nestling. Recovered at Brévauds, par Carentan (Manche), France, about December 16th, 1912. Reported by M. E. Cabieu.

SONG-THRUSH (*Turdus ph. clarkei*).—B.B., No. 40431, marked by Dr. H. J. Moon at the Fylde, Lancashire, on July 5th, 1912, as a nestling. Recovered at Marton, near Blackpool, on February 20th, 1913. Reported by Mr. J. Whittaker.

BLACKBIRDS (*Turdus m. merula*).—B.B., No. 40406, marked as No. 40431 on July 6th, 1912. Recovered at Lytham, Lancashire, on January 14th, 1913. Reported by Mr. J. Cartmell.
B.B., No. 11436, marked by Mr. H. S. Gladstone at Capenoch, Thornhill, Dumfriesshire, on July 8th, 1910. Recovered at the same place on November 28th, 1912.

B.B., No. C539, marked by Mr. J. Bartholomew at Torrance, near Glasgow, on December 2nd, 1911. Recovered at the same place on February 4th, 1913.

B.B., 17665, marked by Miss J. Crookes at Hope, Derbyshire, on May 12th, 1912, as a nestling. Recovered at Monard, co. Tipperary, on January 18th, 1913. Reported by Mr. R. Power.

WHEATEAR (*Enanthe æ. enanthe*).—B.B., No. K842, marked by Dr. H. J. Moon at the Fylde, Lancashire, on May 19th, 1912, as a nestling. Recovered at Cazau, Gironde, France, on September 8th, 1912. Reported by Professor Brasil and in *Le Chasseur francais*.

REDBREASTS (*Dendralus r. melophilus*).—B.B., No. J811, marked by Mr. J. D. Patterson at Goathland, Yorkshire, on June 28th, 1912, as a nestling. Recovered at the same place on January 13th, 1913. Ring replaced and bird released.

B.B., N161, marked by Messrs. Stanford at Aldringham, Suffolk, on September 1st, 1912. Recovered at the same place on March 9th, 1913. Ring replaced and bird released.

B.B., No. C583, marked by Mr. N. H. Joy at Bradfield, Berkshire, on June 18th, 1911, as an adult. Recovered at the same place on May 3rd, 1913.

B.B., No. L197, marked by Mr. A. Broomfield at Chapel-en-le-Frith, Derbyshire, on July 26th, 1912, as a fledgling. Recovered at the same place about second week in December, 1912. Reported by Mrs. Bennett.

LITTLE OWL (*Athene n. noctua*).—B.B., No. 3975, marked by Mr. J. M. Charlton at Caldecot, Uppingham, Rutlandshire, on May 28th 1910, as an adult. Recovered at the same place on December 26th, 1912. Reported by Mr. C. F. Stiles.

SHORT-EARED OWL (*Asio f. flammeus*).—B.B., No. 32600, marked by Mr. A. Mayall near Altnaharra, Sutherlandshire, on June 5th, 1912, as a nestling. Recovered at Plockton, Ross-shire, on January 27th, 1913. Reported by Mr. H. Mackenzie.

BARN-OWLS (*Tyto a. alba*).—B.B., Nos. 32543, 32544, marked by Mr. J. D. Patterson at Goathland, Yorkshire, on July 9th, 1912, as nestlings of same brood. Recovered one at Rosedale Abbey, on March 7th, 1913, and one six miles from Whitby, on November 7th, 1912. Reported by Messrs. M. Pearson and T. Wilson.

SPARROW-HAWK (*Accipiter n. nisus*).—B.B., No. 25935, marked by Mr. A. T. Wallis at Rubery, Worcestershire, on July 7th, 1912, as a nestling. Recovered at Stourbridge on March 15th, 1913. Reported by Mr. J. Bishop.

COMMON HERONS (*Ardea cinerea*).—B.B., No. 50288, marked by Mr. J. R. B. Masefield near Cheadle, Staffordshire, on May 11th, 1912, as a nestling. Recovered four miles north of Lincoln on February 28th, 1913. Reported by Mr. M. Butler.

B.B., No. 50034, marked by Mr. A. Mayall near Scourie, Sutherlandshire, on June 16th, 1912, as a nestling. Recovered at Shiltarlity, near Beauly, Inverness-shire, on December 30th, 1912. Reported by Mr. W. Macdonald.

MALLARD (*Anas p. platyrhynchos*).—B.B., No. 32522, marked by Mr. A. Henderson, per Mr. A. R. Haig-Brown, at Shadwell Court, Thetford, Norfolk, on June 27th, 1912. Recovered at Didlington Hall, Norfolk, in November or December, 1912.

Ten Mallard, ringed on June 5th and July 4th, 1912, by Mr. F. W. Smalley, at Silverdale, North Lancashire, recovered at the same place between August 8th, 1912, and January 4th, 1913.

TEAL (*Anas c. crecca*).—B.B., No. 13396, marked by Mr. W. Bell (Gamekeeper to Sir Richard Graham) at Netherby, Cumberland, on July 24th, 1912, as an adult. Recovered at Rathkeale, co. Limerick, on February 28th, 1913. Reported by Mr. J. Sparling.

STOCK-DOVE (*Columba ænas*).—B.B., No. 25704, marked by Mr. B. Starley at Bubbenhall, near Coventry, Warwickshire, on July 16th, 1912, as a nestling. Recovered at Coventry on March 1st, 1913. Reported by Mr. J. Hodell.

LAPWINGS (*Vanellus vanellus*).—B.B., No. 19656, marked by Mr. R. E. Knowles on the East Cheshire Hills on June 21st, 1912, as a fledgling. Recovered near Montemor Velho, Coimbra, Portugal, in November, 1912. Reported by Dr. Mendanha Raposo.
B.B., No. 14815, marked by Mr. J. S. Elliott at Wretham, Norfolk, on May 27th, 1912, as a nestling. Recovered at Cercial (Alemtejo), Portugal, on January 1st, 1913. Reported by Mr. W. C. Tait.

B.B., No. 18861, marked by Mr. F. W. Hendy near Cat and Fiddle, Buxton, Cheshire side, on July 28th, 1912, as a fledgling. Recovered between Stoneyford and Bennetsbridge, co. Kilkenny, on January 18th, 1913. Reported by Mr. M. O'Regan.

B.B., No. 17582, marked by Mr. T. Pattison, per Mr. M. Portal, at Rockcliffe Marsh, Cumberland, on May 20th, 1912. Recovered at Melingford, co. Kilkenny, on December 9th, 1912. Reported by Mr. P. Neill, Junr.

B.B., No. 17218, marked by Lord Lucas near North Preston, Yorkshire, on May 6th, 1912, as a nestling. Recovered near Annan, Dumfriesshire, on February 24th, 1913. Reported by Mr. C. F. A. Ritson.

B.B., No. 19567, marked by Mr. A. Greg at Claughton, Caton, Lancashire, on May 25th, 1912, as a fledgling. Recovered at Eccleston, near St. Helens, Lancashire, on January 24th, 1913. Reported by Mr. R. Lomax.

B.B., No. 14293, marked by Mr. J. Bartholomew at Kinnelhead, Dumfriesshire, on May 29th, 1912, as a nestling. Recovered at Prestatyn, Flintshire, on January 27th, 1913. Reported by Mr. D. E. Davies.

B.B., No. 17258, marked by Mr. Clark (Gamekeeper to Mr. H. S. Gladstone) at Capenoch, Thornhill, Dumfriesshire, on May 18th, 1912, as a nestling. Recovered at Rathkeale, co. Limerick, on January 13th, 1913. Reported by Mr. G. Teskey.

REDSHANK (*Tringa totanus*).—B.B., No. 15207, marked by Miss A. C. Jackson at Swordale, Evanton, east Ross-shire, on June 9th, 1912, as a nestling. Recovered on the Moray Firth on February 14th, 1913.

CURLEWS (*Numenius a. arquata*). B.B., No. 24844, marked as No. 15207 on June 18th, 1912. Recovered on the Sands of Barra, Outer Hebrides, in March, 1913 (skeleton found). Reported by Dr. J. A. Harvie-Brown.

B.B., No. 24852, marked as No. 15207, on June 21st, 1912. Recovered at the mouth of the River Nith, Kirkconnell, Kirkcudbrightshire, on December 25th, 1912. Reported by Colonel J. Maxwell Witham.

WOODCOCK (*Scolopax rusticola*).—B.B., No. 18404, marked by Sir Richard Graham at Netherby, Cumberland, on May 14th, 1912. Recovered at Cahirciveen, co. Kerry, the beginning of November 1912. Reported by Mr. Edwards.

B.B., No. 18409, marked as No. 18404 on May 15th, 1912. Recovered at Trewarthenick, Grampound Road, Cornwall, on November 28th, 1912. Reported by Lady Molesworth.

B.B., No. 18411, marked as No. 18404 on May 22nd, 1912. Recovered at Blackbank, Netherby, Cumberland, on September 9th, 1912. Reported by Mr. R. Davidson.

B.B., No. 25341, marked by Mr. A. Tait (Gamekeeper to Mr. H. S. Gladstone) at Beuchan Wood, Drumlanrig, Dumfriesshire, on May 8th, 1912, as a nestling. Recovered at Capenoch Hill, Thornhill, on May 1st, 1913. Reported by Mr. C. Hyslop.

B.B., No. 12613, marked by Mr. T. Pattison, per Mr. M. Portal, near Carlisle, Cumberland, on May 15th, 1911, as a nestling. Recovered at Knockmacurragh Mt., co. Kerry, on January 1st, 1913. Reported by Mr. F. R. D. Onslow in the *Field*.

B.B., No. 17543, marked by Mr. Davidson, per Mr. M. Portal, near Carlisle, Cumberland, on May 6th, 1912, as a nestling. Recovered at Kenmar, co. Kerry, during last week of January, 1913. Reported by Mr. H. R. Sargent.

BLACK-HEADED GULLS (*Larus ridibundus*).—B.B., No. 3334, marked by Dr. C. B. Ticehurst, at Llyn Mynyddlod, near Bala, Merionethshire, on June 12th, 1909, as a nestling. Recovered at Bury, Lancashire, in September, 1912. Reported in the *Shooting Times*.

B.B., No. 8835, marked by Mr. J. S. T. Walton at Denton Fell, Cumberland, on May 22nd, 1910, as a nestling. Recovered in Annan Harbour, Dumfriesshire, on March 19th, 1913. Reported by Mr. J. H. Willacy.

B.B., No. 9293, marked as No. 8835 on June 4th, 1910. Recovered at Newbiggin, Northumberland, in September, 1911. Reported by Mr. J. Gradon.

B.B., No. 30162, marked by Messrs. Robinson and Smalley at Ravenglass, Cumberland, on June 11th, 1910, as a nestling. Recovered at Leamington-on-Tyne, on January 15th, 1913. Reported by Mr. H. Dyer in *Cage Birds*.

B.B., No. 30916, marked as No. 30162 on June 13th, 1910. Recovered near Ullrum, Province of Groningen, Holland, on February 16th, 1913. Reported by Mr. H. D. Lourves.

B.B., No. 30676, marked as No. 30162 on June 13th, 1910. Recovered at Skinburness, Silloth, Cumberland, in January, 1913. Reported by Mr. W. Nichol.

B.B., No. 23789, marked by Mr. F. W. Smalley at Ravenglass, Cumberland, on June 12th, 1911, as a nestling. Recovered at Landevenec, near Brest, Finistère, France, on January 27th, 1913. Reported by M. Clergeau.

B.B., No. 27577, marked as No. 23789 on June 8th, 1912. Recovered on the River Ouse at Goole, Yorkshire, on January 12th, 1913. Reported by Mr. Espin.

B.B., No. 28981, marked as No. 23789 on June 17th, 1912. Recovered at Leamington-on-Tyne on September 20th, 1912. Reported by Mr. H. Dyer in *Cage Birds*.

B.B., No. 24641, marked by Mr. H. W. Robinson at Ravenglass, Cumberland, on June 1st, 1912, as a nestling. Recovered at Newport, Monmouthshire, on March 15th, 1913. Reported by Mr. J. H. Millington.

B.B., No. 26542, marked as No. 24641. Recovered at Whitefield, Manchester, on February 14th, 1913. Reported by Mr. A. Cobb.

B.B., No. 26550, marked as No. 24641. Recovered on the banks of the River Humber at Barton Haven, Lincolnshire, on March 12th 1913. Reported by Mr. G. W. Cooper.

B.B., No. 26825, marked as No. 24641 on June 6th, 1912. Recovered in Vigo Bay, Spain, on December 13th, 1912. Reported by Senor Joaquin B. Carsi.

B.B., No. 26907, marked as No. 24641 on June 6th, 1912. Recovered at Llanddyfnan, near Llangefni, Anglesey, in December, 1912. Reported by Mr. R. Williams.

B.B., No. 26891, marked as No. 24641 on June 6th, 1912. Recovered at Sutton Bridge, Lincolnshire, on December 11th, 1912. Reported by Mr. E. Wright.

B.B., No. 26993, marked as No. 24641 on June 7th, 1912. Recovered at Moulton Marsh, Spalding, Lincolnshire, on February 3rd, 1913. Reported by Mr. R. Lloyd.

B.B., No. 27137, marked as No. 24641 on June 8th, 1912. Recovered at Cairndow, by Inverary, Argyllshire, at the beginning of December, 1912. Reported by Mr. C. McCallum.

B.B., No. 27581, marked as No. 24641 on June 8th, 1912. Recovered between Gavres and Port Louis, Rade extérieur de Lorient (Morbihan), France, on December 30th, 1912. Reported by M. Le Commandant de St. Maurice.

B.B., No. 27335, marked as No. 24641 on June 13th, 1912. Recovered on Wainfleet Marsh, five miles from Skegness, Lincolnshire, on December 31st, 1912. Reported by Mr. G. A. Kirk.

B.B., No. 27743, marked as No. 24641 on June 13th, 1912. Recovered at Port Clarence, Middlesbrough, Yorkshire, on December 2nd, 1912. Reported by Mr. A. Cattermole in *Cage Birds*.

B.B., No. 27863, marked as No. 24641 on June 15th, 1912. Recovered at Latchfield Locks, near Warrington, Lancashire, on January 11th, 1913. Reported by Mr. G. Wakefield.

B.B., No. 28795, marked as No. 24641 on June 17th, 1912. Recovered at Crowland, near Peterborough, Northamptonshire, on January 11th, 1913. Reported by Dr. F. Husband.

B.B., No. 27995, marked as No. 24641 on June 17th, 1912. Recovered at South Milford, Yorkshire, at the beginning of April, 1913. Reported by Mr. James Bramley.

B.B., No. 28963, marked as No. 24641 on June 19th, 1912. Recovered at St. Brieuc, Côtes du Nord, France, on December 28th, 1912. Reported by M. L. L. de Villermay.

B.B., No. 29137, marked as No. 24641 on June 19th, 1912. Recovered at Wyke Regis, Dorsetshire, on March 21st, 1913. Reported by Mr. R. Meech.

B.B., No. 22794, marked by Mr. J. Murray (Gamekeeper to Mr. H. S. Gladstone) at Dhu Loch, Penpont, Dumfriesshire, on June 28th, 1911. Recovered at Cockermouth, Cumberland, in March, 1912. Reported by the Rev. A. V. Hodges.

B.B., No. 28410, marked by Mr. A. Bankes near Corfe Castle, Dorsetshire, on June 18th, 1912, as a nestling. Recovered at Mealhada, near Coimbra, Portugal, about the beginning of February, 1913. Reported by Mr. W. C. Tait.

B.B., No. 26236, marked by Mr. T. C. Hobbs at Hallington Reservoirs, Northumberland, on June 17th, 1912, as a fledgling. Recovered at Houghton-in-the-Dale, Norfolk, on January 10th, 1913. Reported by Mr. F. W. Miller.

HERRING-GULL (*Larus a. argentatus*).—B.B., No. 8377, marked by Miss A. C. Jackson at North Sutor, Cromarty, Ross-shire, on June 24th, 1912, as a nestling. Recovered near Dingwall, in December, 1912. Reported by Mr. D. Watt.

LESSER BLACK-BACKED GULL (*Larus f. affinis*).—B.B., No. 31055, marked by Messrs. Robinson and Smalley at Foulshaw, Westmorland, on June 24th, 1910, as a nestling. Recovered at Nieul-sur-Mer, Charente Inférieure, France, on April 26th, 1913. Reported by M. H. Charonnat.

MARKED ABROAD AND RECOVERED IN ENGLAND.

BLACK-HEADED GULL (*Larus ridibundus*).—Rossitten, No. 2169, marked as a nestling in Schleswig, Germany, on July 4th, 1912. Recovered at Terrington Main, near King's Lynn, Norfolk, about the middle of October, 1912. Reported by Mr. S. H. Allen. Rossitten, No. 1878, marked as No. 2169. Recovered at Long Sutton, Lincolnshire, on November 26th, 1912. Reported by Mr. J. Hallifax.

NOTES

INCREASE AND DECREASE IN SUMMER-RESIDENTS.

OUR Readers are reminded that a Schedule relating to this inquiry was sent out with the March issue of the Magazine. We hope that every Reader who is able to give any information on the subject, will fill in the details and return the Schedule by the end of the breeding-season. Further copies of this Schedule, as well as of that for the Land-Rail inquiry, will be supplied on application. THE EDITORS.

JAY IMITATING THE "DRUMMING" OF THE SNIPE.

As an imitator of alien sounds the Jay (*Garrulus g. rufitergum*) is notorious, and moreover possesses notes of his own both harsh and beautiful. But though fully aware of his faculty in this respect, I was nevertheless surprised to hear one imitate, and imitate very well, the "drumming" of the Snipe (*Gallinago g. gallinago*). However, there was no doubt about it. I was standing in some marshy ground watching the Snipe as they circled round, when a Jay appeared and settled in a hedge some fifty yards from where I was standing. There he remained for some time preening his feathers, when to my surprise I heard the "drumming" sound proceeding not only from above, where the Snipe were still circling, but also from the hedge. Not satisfied that a Jay was capable of reproducing so peculiar a noise, I watched his movements the more carefully, and was ultimately able to observe that as he moved from one part of the hedge to another, so the sound proceeded from just that part in which he had settled.

H. ELIOT HOWARD.

GOLDEN ORIOLE IN CO. TYRONE.

MESSRS. Sheals, taxidermists, have received a female Golden Oriole (*Oriolus o. oriolus*) from Coalisland, co. Tyrone, which was found dead and brought in by a dog on May 11th, 1913.

WM. C. WRIGHT.

CIRL BUNTING IN ESSEX.

WITH reference to the note by Mr. J. H. Owen (Vol. VI., p. 372) on Ciril Buntings (*Emberiza cirilus*) breeding in Essex, it may be worth recording that I saw on June 4th, 1910, a male Ciril Bunting in Wrabness parish, Essex. It was sitting

in the sun on the top of a haystack and lazily drawing out its monotonous song for the greater part of an hour. I saw no hen-bird, but I think, from the date, that it must certainly have been breeding.

WALTER B. NICHOLS.

NORTHERN WILLOW-WARBLEDERS IN WIGTOWNSHIRE.

ON May 3rd, 1913, while staying at the Mull of Galloway for the purpose of watching migrants, we saw a number of Willow-Warblers in a hedge. A careful inspection of these showed that they were all of the common form except one, which we thought by the brown colouring of its upper-parts and by its white under-parts was an example of the northern form, *Phylloscopus trochilus eversmanni*; we could not, however, get such a good view of the bird as to make certain. On the next day, May 4th, we found in the same hedge at least five, and probably six or eight (it was difficult to count the exact number), undoubted examples of *Ph. t. eversmanni*. We had many good views of them at very close quarters: they were entirely brown (rather dark) on the upper-parts without a trace of green, while their under-parts were greyish-white with no yellow whatever except on the under wing-coverts, and their eye-stripes were also quite white.

The common Willow-Warblers had moved on, while a good many Whitethroats, some Sedge-Warblers, a Redstart, and a Spotted Flycatcher had come in. On the following day, May 5th, the Northern Willow-Warblers had gone and the whole place swarmed with Common Whitethroats; there must have been *many* hundreds, and quite a number were to be seen on the rocks and beach; there were also on this day numbers of Sedge-Warblers and common Willow-Warblers.

J. G. GORDON.

H. F. WITHERBY.

LESSER WHITETHROAT IN IRELAND.

I HAVE just received from Rockabill Light, co. Dublin, a specimen of the Lesser Whitethroat (*Sylvia c. curruca*) (sex not yet determined). It was disabled by striking on the night of May 13th, 1913, and was accompanied by many Sedge-Warblers and Common Whitethroats. This is the third Irish record, and the first specimen received on spring-migration, two others having been obtained in autumn—one on October 1st, 1890, at the Tearaght Rock, co. Kerry, and the second at Innishtrahull, co. Donegal, on October 10th, 1899.

RICHARD M. BARRINGTON.

WHINCHAT WINTERING IN YORKSHIRE.

I AM not aware whether the Whinchat (*Saxicola rubetra*) has been recorded as wintering so far north as Yorkshire. I saw one at Ottringham, East Yorkshire, on January 3rd, 1913.

M. WINZAR COMPTON.

EARLY BREEDING AND LARGE CLUTCH OF EGGS
OF BARN-OWL.

A FRIEND of mine found two eggs in a nest of the Barn-Owl (*Tyto a. alba*) at Bradfield, Berks, on March 25th, 1913, and by March 30th four had been laid. I have known this nest since 1910, and in my experience the eggs were not laid till the second week in May. In 1910, on June 10th, it contained eight eggs and one young bird, an unusually large clutch.

A. B. FLETCHER.

[Although many Barn-Owls do not lay till May, there are a good many instances on record of breeding in April. The only definite record of eggs in March with which I am acquainted is that mentioned in the *Zoologist*, 1867, p. 601, where W. V. Legge describes finding two eggs in Essex on March 24th, 1866. The normal clutch of this species is about five or six, but instances of seven and eight are not very rare. Mr. Hughes-Hughes has a clutch of nine eggs from Cheshire, taken by the late W. Purnell, and another set of nine eggs has been taken in Denmark (*Orn. Monatsber.* 1908, p. 39). Still higher numbers have been occasionally met with. M. A. Mathew records a clutch of ten all fresh, and W. Purnell took a set of ten at Hatherton, Cheshire, now in the British Museum. The largest number of which I have a note is eleven (J. Murton, *Zoologist*, 1870, p. 2181), which were found at Carnforth. In the *Zoologist*, 1913, p. 175, Mr. J. H. Gurney after referring to three instances in which Barn-Owls' nests have been found in Norfolk with seven eggs or young, states that "the Barn-Owl generally lays more eggs than the Tawny Owl." This is rather a mild form of stating a well-known fact, for while four is an exceptionally small clutch for the Barn-Owl, and sets of five and six are normal, the usual clutch of Tawny Owls in this district is only two or three in number. Sets of five are quite rare and I have only notes of about a dozen instances altogether.—F. C. R. JOURDAIN.]

MARSH-HARRIER IN CHESHIRE.

ON May 4th, 1913, I saw a large raptorial bird which I was unable then to identify, flying over Rostherne Mere, Cheshire.

On the following day I put it up three times from a wet willow-bed and a reed-bed at opposite ends of the mere, on one occasion getting within ten yards of it before it rose. It proved to be an adult female or immature male Marsh-Harrier (*Circus aeruginosus*). Its head was entirely cream-coloured and was a most striking feature even at a considerable distance; on examining the series of skins of this species in the "Dresser" Collection, I found a specimen which it resembled very closely—a female shot in Asia Minor in March.

After giving me an excellent opportunity of watching it for some time as it flew with slow wing-beats and glided over the mere, it rose to a great height and disappeared from view in the north.

A. W. BOYD.

GREENLAND FALCON IN CO. DERRY.

MESSRS. Sheals have had sent to them for preservation a fine male Greenland Falcon (*Falco r. candicans*) which was shot at Dungiven, co. Derry, on April 15th, 1913.

WM. C. WRIGHT.

BEWICK'S SWAN IN SHROPSHIRE.

IN January, 1913, an immature example of Bewick's Swan (*Cygnus bewickii*) was shot out of a party of three at Claverley, near Bridgnorth. It was cooked and eaten, and the flesh was said to resemble in colour and flavour that of the hare. I did not hear of it for some time after, but fortunately the feet had been kept, and one of these was procured and sent to me by Mr. W. Wells Bladen. From the measurement of the tarsus there is no doubt as to the species. There are several previous occurrences on record in the county, the most notable being in December, 1899, when a flock of twenty-three visited Ellesmere and stayed for several days on the meres.

H. E. FORREST.

GEESE KILLED BY LIGHTNING.

A SEVERE and sudden storm broke over a farm between the Solway and Annan (Dumfriesshire) early in April, 1913. The farm men working on a field all ran for shelter; as they ran they heard thuds behind them, but ran the faster. On their return later, they found eighteen dead Barnacle-Geese (*Branta leucopsis*), two of which were singed, but the rest not marked; another was found further off. They must have been part of a flock migrating high up in the air, as none were seen or heard passing.

M. PORTAL.

[In our first volume (p. 29) Mr. J. H. Gurney recorded a similar accident to a number of Pink-footed and White-fronted

Geese in Norfolk, and Mr. Jourdain gave details (p. 62) of the killing by lightning of some Brent Geese in Jutland.—EDS.]

INEQUALITY OF SEXES AMONG DIVING DUCKS.

I HAVE often noticed in Orkney a great predominance of one sex over the other among the Diving Ducks, and especially in the case of those species which visit our shores as winter-migrants. Among the resident-species females are much more numerous than males in the Eider, Merganser, Goosander and Tufted Duck. But among the migratory diving ducks the case is just the reverse and drakes largely predominate. Long-tailed drakes outnumber ducks by three to one, and by more than this if we include young drakes, which being so much like ducks are difficult to distinguish without handling. In the case of Scaup the same applies, drakes outnumbering ducks by about five to one. The difference is not quite so apparent in the Goldeneye, because many of the birds seen which appear to be ducks at a distance are in all probability young drakes, at least that is my experience, for nearly all the supposed females that I have shot have proved on examination to be young males.

The greatest difference however is shown in the case of the Pochard and Velvet-Scoter, where drakes outnumber ducks by at least fifty to one in the case of the former, and about twenty to thirty to one in the latter. Indeed it is most difficult to get a female of either species in Orkney. One day I took the trouble to count the Velvet-Scoters seen, and out of eight flocks containing in all one hundred and seven birds there were only five females. The first lot of three included one female, with the second flock of twenty-two were two females, the third flock of eighteen were all males, the fourth flock of thirty-one contained one female, the next three lots of seven, ten and eight respectively were all drakes, and with the last lot of eight was one female.

This predominance of males is still more marked in the case of the Pochard. One enormous pack of over five hundred birds on Loch Stenness contained but two females, and I think I am putting the predominance of males in the case of the Pochard at a low figure when I give it as fifty to one.

Such being the scarcity of females among the migratory diving ducks in Orkney, is it possible that most of the females remain in their nesting-haunts, and that only the males with a sprinkling of females migrate to our shores in any

numbers? Whatever be the reason, it is curious that in the case of the resident species, females exceed the males in number.

H. W. ROBINSON.

BARROW'S GOLDENEYE AND THE COMMON GOLDENEYE.

REGARDING the very interesting article on the above (Vol. 6, p. 272-6) I had the pleasure of examining a couple of adult male Barrow's Goldeneye (*Nyroca islandica*) sent from Scalloway, in the Shetlands. They were forwarded to Mr. Bristow of St. Leonards, who kindly showed me the letter accompanying them, and afforded me every opportunity for examination.



The birds were shot on March 18th, 1913, as Common Goldeneye (*Nyroca c. clangula*) and sent to Mr. Bristow as such. The first thing I noticed about them was the crescent-shaped white patch on the side of the head, which as will be seen in the photograph is quite easily distinguished from the smaller, and round patch, in the Common Goldeneye. This is in itself enough to identify the bird when within shooting distance, and to my idea a valuable point, as it should save the wanton destruction of the Common Goldeneye,

in the hope of obtaining the rarer species. Another striking contrast is the unbroken bar of white on the wing of the Common, which is broken in the two specimens of Barrow's.

However it is hard to say, unless a number of specimens can be examined, to what extent these markings vary, and I must point out there are great differences in the two birds obtained by Mr. Bristow. In one of them there is far more white at the base of the neck than in the other, but it will be noticed that in the Common Goldeneye the white from the breast extends *beyond* the wing, whereas in the two specimens of Barrow's Goldeneye it does *not* reach beyond.

Regarding the "boss" on the forehead, this was remarkably well developed in the two specimens I examined, and the scapular-feathers had the black portion of the rami elongated. But of course these last two facts could not be ascertained without being able to handle the birds.

H. W. FORD-LINDSAY.

[There is no doubt that the birds are examples of Barrow's Goldeneye, the adult males of which are perfectly easy to distinguish, and could never be overlooked by anyone who knew the Common Goldeneye. The article referred to by Mr. Ford-Lindsay was written for the purpose of showing differences in the *young* males and *females* of the two species. We think that confirmatory records should be awaited before the species is fully admitted to the British List.—EDS.]

THE DIVE OF THE LONG-TAILED DUCK.

WHETHER the Long-tailed Duck (*Clangula hyemalis*) uses its feet only under water, as is stated to be Mr. Millais's view in the review of his book in the last issue of BRITISH BIRDS, or whether it uses its wings as well, as stated by Dr. C. W. Townsend, I cannot definitely say, but it may be worth noting that I have several times observed Long-tailed Ducks, when under great stress, emerge from the water after a dive with their wings spread and take to instant flight. But I have only seen old males do this, and only when they have miscalculated the speed and direction of a sailing boat, and in such cases the first bird to arrive on the surface has been in a normal attitude with wings closed, but some of those following have risen from the water straight from their dive with wings open and in full flight. H. W. ROBINSON.

[It does not appear from Dr. Townsend's description that he had actually seen the wings used under water, and it would seem that he drew his conclusions from the attitudes of the duck at the moment it dived and when it emerged.—H.F.W.]

EIDER IN NORTH WALES.

ON March 15th, 1913, Mr. F. Brownsword saw a couple of drake Eiders (*Somateria m. mollissima*) in adult dress swimming in Colwyn Bay. The bird is rare off the North Wales coast.

I. A. COWARD

BLACK-WINGED PRATINCOLES IN SUSSEX.

TOWARDS the end of April, 1913, a party of four Black-winged Pratincoles (*Glareola nordmanni*) was observed near Rye, Sussex. All of them were eventually obtained by the same man. One shot on April 30th proved to be a male, two on May 1st were male and female, and the last shot on May 3rd was a female. I saw all the birds in the flesh as shot, and they were in splendid condition. The last bird was not recovered until the next day; being obtained late in the evening, it could not be found as the light was bad, but on searching early next morning it was located, floating in a dyke.

H. W. FORD-LINDSAY.

DOTTEREL IN WIGTOWNSHIRE.

As the Dotterel (*Charadrius morinellus*) is rarely reported from south-west Scotland, it is worth noting that we saw one, which appeared to be all alone, on a ploughed field at the Mull of Galloway, on May 3rd, 1913.

J. G. GORDON.

H. F. WITHERBY.

YOUNG SANDPIPERS SWIMMING UNDER
WATER.

SINCE reading the review of Mr. Millais's *British Diving Ducks* in the May number of BRITISH BIRDS, where it is stated that further observation is required as to the extent the diving ducks use their wings under water for propulsion, it has occurred to me that the following observation, though made some years ago, of young Sandpipers thus using their wings, might be of some interest. On June 17th, 1898, Mr. Ben Tait, my brother, and I walked over to Loch Chesney (Wigtownshire) to try for perch. Near the boat-house a pair of Common Sandpipers (*Tringa hypoleuca*) were flying about in a very excited way: one even flopped along the surface of the water and then ran on the shore trailing one wing. We now spied one of the young ones more than half-grown near the boat, under which it ran, and on pushing the boat quietly into the water we found three squatting close on the ground. My brother touched one, and with general accord they all dashed into the loch, diving and swimming under

water for about five yards with great rapidity. On coming to the surface they floated very lightly on the water, and paddled quietly to a pier of rough stones near by, where they landed. When swimming under water they were clearly seen to use their wings as well as their legs as a means of propulsion.

J. G. GORDON.

[The diving and swimming powers of both young and adult Common Sandpipers are of course well known, and need no corroboration. I can however quite confirm what Mr. Gordon says as to the use of the wings, when under water, by the young of this species, having observed it more than once. On one occasion while fishing in Norway, I disturbed a brood of half-grown young ones on the sandy shore of a lake; two of these at once took to the water, which was about a foot deep—clear, and bottomed by white sand, so that as I stood in the water I could watch their every movement from directly above. The wings were fully extended and moved in regular up-and-down strokes, exactly as is done by certain diving birds.—N.F.T.]

PROBABLE SCANDINAVIAN LESSER BLACK-BACKED GULLS IN NORFOLK.

SINCE Dr. Percy Lowe called attention to the fact of their probably being two races of European Lesser Black-backed Gulls, namely a Scandinavian or eastern dark-backed race (*Larus fuscus fuscus*) and a western light-backed form (*Larus fuscus britannicus* or *affinis*), I have paid particular attention to this Gull upon the coast of Norfolk. Unfortunately it is not a common bird here, and being also very wary, I have so far not been very successful in obtaining specimens.

I have, however, on one or two occasions seen Lesser Black-backed Gulls with what appeared to me to be dark mantles, and on May 1st, 1913, I am perfectly satisfied in my own mind that I saw two examples of this dark-backed race.

On this day I was on Breydon with Mr. A. F. Sherlock in a gun-punt, and seeing through glasses some Gulls which looked like Lesser Black-backs amongst a mixed flock of Greater Black-backs, Common and Black-headed Gulls on a strip of mud, we "lay to" them, and got within about twenty-five yards.

There were four adult Lesser Black-backed Gulls, the yellow legs of all four being very conspicuous. Two had mantles of a slate or dark french-grey, and two of a dark slaty-black, as dark or darker than that of a Greater Black-

backed Gull, with which I was able to compare them. Having these four birds under observation at the same time all standing close together, this difference in colour was so very striking that Mr. Sherlock, who is an experienced wild-fowler and keen observer of birds, at once commented upon it.

I am well aware that "What's hit is History, and What's Missed is Mystery," and possibly a statement of this kind has very little value, except to call the attention of other ornithologists to the question, but I cannot help being convinced in my own mind that, provided it is quite certain that this difference in the colour of the mantle is a geographical difference and not a matter of variation or a question of age, then these birds which I saw were examples of *Larus fuscus fuscus*.

During the next shooting season I hope to obtain a sufficient number of Norfolk-shot specimens to confirm my opinion.

B. B. RIVIERE.

REMARKABLE VARIETY OF THE PHEASANT.—In December, 1912, Mr. A. Johnson-Ferguson kindly forwarded to me for examination a remarkable specimen of the common hybrid Pheasant (*Phasianus colchicus* \times *torquatus*) which had been caught at Springkell, Dumfriesshire. It was a female, and the ovary was normal, but the bird was in an emaciated condition and had some yellow watery sores under the skin; but I suppose that this diseased condition could not be connected with its abnormal plumage. The plumage showed a remarkable combination of melanism, erythrism, and albinism. The whole of the upper-side and wing-coverts were so suffused with black and deep brown that the usual greyish-buff edgings and markings had almost disappeared, and were only represented by narrow wavy lines near the tips and notch-shaped markings on the edges of the feathers. The back of the neck and upper-mantle were dark chesnut marked with black, and many of the feathers had small metallic-green tips. The chin, throat, lores (on one side only), and sides of the neck had many white or white-tipped feathers, and there were a number of white feathers on the points of the wings (carpal joints), and a trace of white on some of the feathers of the belly. The whole of the rest of the underparts were rich chesnut, with large black spots and bars, and a narrow penultimate dark buff band on most of the feathers. The tail was of a dark brown like the back, with broad black markings and narrow reddish-buff wavy bands.

I exhibited this specimen at the January meeting of the British Ornithologists' Club, and at the next meeting the

Hon. Walter Rothschild exhibited four females and a male in this curious plumage. Three of the females and the male were purchased in Cambridge Market in 1889, and were said to have come from Elveden Hall, while the other female was obtained some years later in Leadenhall Market. It is a remarkable fact that all these females exactly match Mr. Johnson-Ferguson's specimen, so much so that one would think they belonged to a distinct species or were the result of some definite cross. Mr. Rothschild agrees with me that they are not the result of hybridization, and he regards them as a counterpart of the dark variety of Snipe known as Sabine's Snipe.

If they are the result of an excess of black and red pigment it is surely an extraordinary coincidence that these pigments should be so nicely balanced as to produce the same pattern and shade of colouring in all these specimens. It seems to me that they should be regarded as instances of discontinuous variation or mutation. H. F. WITHERBY.

UNCOMMON BIRDS IN THE MORAY AREA.—Miss A. C. Jackson records (*Scot. Nat.*, 1913, pp. 92 and 93) the following rarities for this part of Scotland: A Little Stint (*Erolia m. minuta*) on the Beaully Firth on September 23rd, 1912, a Red-necked Phalarope (*Phalaropus lobatus*) on the same Firth on October 22nd, a Great Crested Grebe (*Colymbus c. cristatus*) at the same place on October 26th, a Green Sandpiper (*Tringa ocrophus*) on the Cromarty Firth on November 1st, 1912, a Leach's Fork-tailed Petrel (*Oceanodroma leucorhoa*) on the Beaully Firth on November 11th, and some Roseate Terns (*Sterna d. dougalli*) "in a certain locality" at the end of June, 1912. This last record is perhaps the most interesting, as the date points to the likelihood of breeding.

CARRION-CROW REPORTED FROM IRELAND.—In the *Irish Naturalist* (1913, p. 43) Mr. G. C. May stated that Mr. F. Mason and his son had seen a Carrion-Crow (*Corvus c. corone*) on Lambay Island off co. Dublin. Some doubts as to the correctness of the identification having been expressed (*t. c.*, pp. 83-4) Mr. Mason writes (p. 99) that the bird was at Lambay from about the middle of December, 1912, to the first week of March, 1913, that he was frequently within shot of it, that it kept apart from the Rooks, and that its "caw" was quite different. He also states that his son lived as a keeper in Yorkshire, and had there shot Carrion-Crows.

TREE-SPARROWS IN CO. KILDARE.—Miss H. M. Metcalfe states (*Irish Nat.*, 1913, p. 82) that she watched a party of seven *Passer m. montanus*, of which she gives an accurate

description, near Johnstown Bridge, co. Kildare, on January 27th and February 1st, 1913. The bird is rare and very local in Ireland.

CIRL BUNTING IN LEICESTERSHIRE.—Mr. H. S. Davenport writes (*Field*, 22.II.1913, p. 383) that he saw a male *Emberiza cirius* near Melton Mowbray on February 16th, 1913. The bird has very rarely been recorded from the county.

THE IRISH COAL-TIT.—Mr. Collingwood Ingram remarks (*Zool.*, 1913, p. 76) that of three specimens of Coal-Tit which he obtained in Islay (Inner Hebrides), two had the cheeks very slightly suffused with pale yellow and one was like the typical *Parus a. britannicus*. This is interesting because the island lies not far from the north-east of Ireland, and the specimens of the Coal-Tit which we have seen from that district are like those described from Islay, sometimes faintly washed with yellow and thus intermediate between the typical *Parus a. hibernicus* and *P. a. britannicus*, and sometimes indistinguishable from the typical *P. a. britannicus*.

GLOSSY IBIS IN SKYE.—Dr. J. A. Harvie-Brown reports (*Scot. Nat.*, 1913, p. 68) that a specimen of *Egretta f. falcinellus* occurred at Glendrynoch, Skye, on November 1st, 1911.

SQUACCO HERON IN CO. MAYO.—Mr. A. R. Nichols writes (*Irish Nat.*, 1913, p. 81) that an adult male *Ardeola r. ralloides* has been acquired by the Dublin Museum. It was obtained in June, 1912, near Westport, co. Mayo, and has not, we think, been recorded before.

STONE-CURLEW IN CO. CORK.—Mr. R. Warren records (*Zool.*, 1913, p. 108) that a specimen of *Burhinus æ. ædicnemus* was obtained in co. Cork in the last week of February, 1913. There are only ten previous records for Ireland. All have occurred between the autumn and early spring.

RUFF IN ISLAY.—Mr. Collingwood Ingram reports (*Zool.*, 1913, p. 76) that a male specimen of *Machetes pugnax* was obtained on Islay (Inner Hebrides) on September 11th, 1912.

GREEN SANDPIPER IN DUMBARTONSHIRE.—Messrs. G. Stout and H. Duncan record that a specimen of *Tringa ocropus* was obtained on January 9th, 1913, near Kirkintilloch (*Scot. Nat.*, 1913, p. 69).

QUAIL NESTING IN SHETLAND.—Mr. S. Bruce records (*Scot. Nat.*, 1913, p. 92) that he received some eggs in September, 1912, from the island of Whalsay which proved on examination to be those of Quail (*Coturnix c. coturnix*). The bird has occasionally been recorded previously as breeding in the Shetlands.



LETTERS



“DRUMMING” OF THE SNIPE.

To the Editors of BRITISH BIRDS.

SIRS,—In his interesting comments on this subject Captain Lynes suggests (Vol. VI., p. 356) that Snipe do not “drum” “except at (or near) a district in which the species is known to breed.” My experience here (South Holderness) would seem to uphold this as a general rule, while it denies the fact in a particular instance. In this district Snipe do not, so far as I am aware, breed, and though they are plentiful from August to mid-April, I have in the last ten years only twice heard them “drum,” once at a normal (April 6th, 1909) and once at an abnormal (November 18th, 1912) season, on both occasions after sunset. I would suggest that the difference between the occasional out-of-season “drumming” of the Snipe and the regular winter-song of some other birds is one of degree only, and that one might find regular gradations connecting the two. As an instance I would quote the Lapwing, whose breeding-cry and tumbling flight are not infrequently to be heard and seen on a fine day in October or November. I notice no one records having heard the real (i e. vocal) breeding-song of the Snipe out of season.

KEYINGHAM, *May 19th*, 1913.

M. WINZAR COMPTON.

To the Editors of BRITISH BIRDS.

SIRS,—Whether or not Captain Lynes is correct in his supposition that the out-of-season “drumming” of the Snipe is connected with an abnormal sexual activity of individual birds, I will not attempt to discuss. In the Yorkshire Derwent Valley great numbers of Snipe nest every year, and during the winter the flooded land often swarms with both Common and Jack Snipe. On many occasions during last winter in the months of October, November, December, January and February, I listened to the “drumming” of Snipe. I now regret that I did not make notes upon the weather-conditions prevailing at the various dates. It has been during the quiet of the closing day when ensconced in a “flight screen” waiting for ducks and other wild fowl that I have noticed the Snipe most particularly. Snipe come over singly and in wisps just before the main flight of heavy fowl commences, and arriving over their usual feeding-grounds (their summer nesting-places) they fly upwards and start their spring-time antics in

the air, volplaning down, "drumming" loudly, and continuing the sport after it is far too dark to see the fowl that are fighting over. Sometimes quite a number have been "drumming" together, and as they were plainly in view it is impossible to have been mistaken. On at least two recent dates I have seen the Snipe on the wing and heard it "drumming" during the day, but the performance has not been continued longer than a few minutes, whereas the duration of the "drumming" at dusk has been upwards of half an hour. The foregoing supports Captain Lynes's view that the Snipe "drums" within the area of its breeding-range. It would be interesting to know whether the Snipe I have heard were locally-bred birds or not. Marking-rings have been placed on a good many young Snipe in this district, but as yet none of the birds have been recovered.

HEWORTH, YORK, *May 20th*, 1913.

SYDNEY H. SMITH.

THE SINGING OF BIRDS ON MIGRATION.

To the Editors of BRITISH BIRDS.

SIRS,—In his paper on the "Drumming of the Snipe" (Vol. VI., pp. 354-9), Captain Lynes throws much light on a very interesting question. But I cannot accept without qualification what he says with regard to the allied subject of the singing of birds on migration. My own experience is that some birds do sing on migration. It is true that in an island like Heligoland—a small bare expanse of cultivated plots diversified with disappearing big guns—the Nightingale never sings. Gätke always regretted that he had never heard it. But when a migrant finds himself in a comfortable resting-place suggestive of the land that he is bound for, then he will sometimes burst into song. In Malta one Sunday in April, when half the population had turned out to shoot Quails, among the popping of guns I heard the song of a Nightingale coming loud and strong from a low bushy tree. Mr. C. A. Wright ("Birds observed in Malta and Gozo," *Ibis*, 1864) often "listened to its thrilling notes." Another April I heard a Nightingale singing with great spirit in the island of Delos. There was much better shelter for him than he could have found in Heligoland, to wit, an enormous mallow; but it seems unlikely that he was thinking of nesting in so bare an island. At Ismailia I heard two Nightingales singing in the public garden one April morning: the bubbling notes were given with vigour though the long notes were omitted. The head gardener, a Frenchman of some education, told me that the Nightingales never stayed to nest. Besides the Nightingale I heard

the Rufous Warbler singing in the Delta. But possibly this Warbler may be a winter-visitor there, not a bird of passage. In Malta and Gozo I heard the Willow-Warbler and the Common Whitethroat singing. The cry of the Cuckoo was also to be heard. These birds, according to Mr. A. L. Adams (*Natural History and Archæology of the Nile Valley and the Maltese Islands*) and Mr. C. A. Wright (quoted above), are birds of passage in Malta. The Cuckoo, however, I was told, sometimes bred there.

With regard to the winter-song of migrants, what observations I have been able to make agree with those of Captain Lynes. It is true that in January, 1898, Robins, Wrens, Blackcaps and a great many Chiffchaffs were in full song at Constantine, but on the plateau there all these species may be resident. I have no book on hand to refer to on the subject. In the oases further south I did not hear the Chiffchaff's note. In Egypt, too, it was silent in January. But it is very difficult to suggest a reason why in winter-time a migrant should feel less inclined for song than a resident bird.

F. W. HEADLEY.



REVIEWS



A Dictionary of English and Folk-Names of British Birds With their History, Meaning and first usage: and the Folk-lore, Weather-lore, Legends, etc., relating to the more familiar species. By H. Kirke Swann. Witherby and Co. 10s. net.

THIS book will be welcomed by all those who take an interest in the names, local or otherwise, of our British birds. The author, in his preface, states that he has for the past eighteen years been engaged in its compilation, and he is to be complimented on the result of his laborious research.

It is to be regretted that throughout the Dictionary reference is given to species, which are known by a double name, under the first letter of the name; thus "Red-legged Crow" is indexed only under R, and not, as one would expect from common usage, under Crow, Red-legged. The ideal plan would doubtless have been to have entered it under both R and C and to have given cross-references, but possibly this has not been done so as to save adding to the bulk of the book. In any case it would certainly have been more in accordance with general practice in similar works, had reference been made to the substantive rather than to its adjectival or qualifying attribute.

The fact that the alphabetical sequence is continuous throughout the Dictionary with no break between characters is a fault for which it is difficult to assign a reason. Although a key to the contents of each opening is given in the head of every right-hand page, a well marked division would have improved the appearance of the book, and the blank pages bound in at the end, might have been increased in number and distributed very conveniently throughout as breaks.

In the Bibliography given on pp. ix.-xii., no mention is made of John Ray's *Collection of English Words*, 1674, a little book on pp. 81-96 of which is given "A Catalogue of English Birds," besides containing other local ornithological names elsewhere in the text. The date of this publication would give it precedence over Willughby's *Ornithology* of 1676 (Latin) or 1678 (English) as giving the "first usage of the accepted names" of several species. Nor is there any reference to Rev. F. O. Morris's *History of British Birds*, in the second edition of which (6 vols. 1870) the inclusion of local names of the different species forms a distinctive feature.

The "Terms denoting Associations of Birds," given on p. 8 of the work now under review, might conveniently have been made the subjects of cross-reference, if indeed the information here given would not have been more suitably placed under the individual species. In any case the list is meagre, and might have been extended by reference to *The Boke of Saint Albans*, 1486 (quoted by Daniel, *Rural Sports*, Vol. II., 1812, p. 480), or to the correspondence on the subject in the columns of the *Field* (1912), October 19th, p. 770; November 2nd, p. 869; and November 16th, p. 1015.

In his "Preface" the author states of his Dictionary that "to say that even as now published it is complete, would be claiming too much for it, since with such a vast field open to research, both in literature and dialect, the possibilities of addition and correction are still very great." The work has been so carefully compiled that the Author's apology seems almost unnecessary; still there are a few statements on which comment may here be made. The name Gunner is allotted to the Great Northern Diver, and no mention is made of the fact that it is often applied to the Yellowhammer. Stockanet as a name for the Sheld-Duck is not confined to East Scotland. There is no mention of the term Black to denote Blackgame, in common use on the eastern Borders; nor is the name Dyker or Dykie given as a well-known name for the Wheatear in the South-west of Scotland. It might have been stated that from the sedate way in which Cormorants sit at the edge of the ebbing tide they have been likened to "Elders of the Kirk," and that this is the reason for the species being called Cow'en (Colvend), and Mochrum, Elders on the Scottish shore of the Solway. The name Cowdaw for Jackdaw, used in Norfolk and Suffolk, may be added on the authority of Sir William Jardine. Under Stankhen or Stankie for the Moorhen, it is stated that "Stank is almost an equivalent of *moat*"; the similitude of this term to the French *étang* and the Latin *stagnum*, a still pond or pool, is surely even as worthy of note.

The above remarks have not been written with the idea of disparaging a work which reflects high credit on its author; his Dictionary will be of the utmost value to all ornithological and philological students, and he is to be congratulated on so faithfully completing a work which must have demanded of him an enormous amount of time and patience.

HUGH S. GLADSTONE.



GREY LAG-GOOSE COVERING HER EGGS.

(Copyright by Mary G. S. Best.)

BRITISH BIRDS

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THE SENSE OF SMELL IN THE GREY LAG-GOOSE.

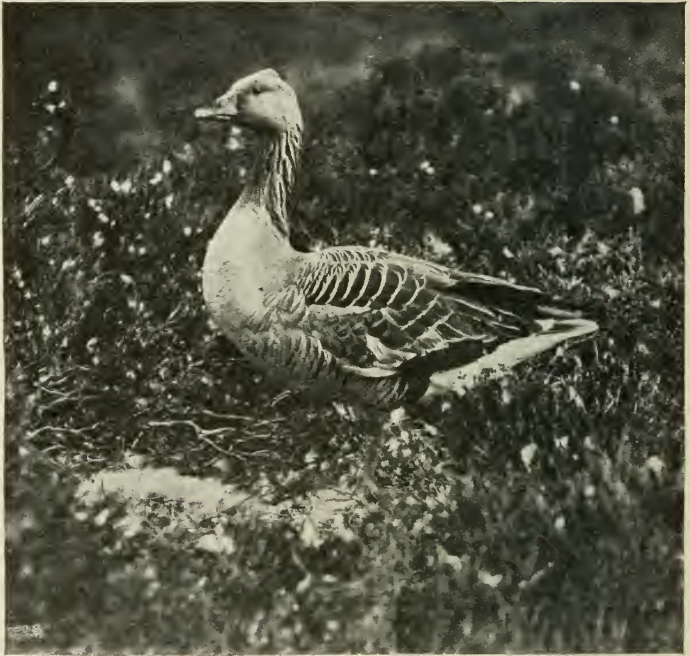
BY

MARY G. S. BEST AND MAUD D. HAVILAND.

(PLATE 1.)

IN support of Dr. Penrose's observations on the sense of smell in birds (see Vol. VI., p. 266), we venture to record the following incident which came under our notice recently, while photographing the Grey Lag-Goose (*Anser anser*) in the Hebrides.

On May 8th, 1913, we found the nest of a Goose with partly-incubated eggs, and put up a hiding-tent close by. Owing to the nature of the ground, the tent was erected about nine feet north-west of the nest.



GREY LAG-GOOSE APPROACHING ITS NEST.

(Copyright by Mary G. S. Best.)

On May 12th, Miss Best went into the tent with her camera. There was then a gentle south-east wind which blew from the nest towards the tent. The bird returned readily, and did not appear suspicious either of the tent or of the shutter of the camera.



GREY LAG-GOOSE BROODING.

(*Copyright by Mary G. S. Best.*)

On May 13th, Miss E. L. Turner went to the tent. The bird was away feeding, and Miss Turner therefore entered without being seen. The wind had shifted to the north-west and was then blowing straight from the tent to the nest. The bird soon returned by her accustomed track, and when within a few feet of the nest, she suddenly threw up her head and took wing, screaming with fear. An hour later she came back, only to behave in the same manner, and after this she did not return for the several hours during which Miss Turner waited.

On May 14th, Miss Haviland visited the nest. The wind was still north-westerly but was exceedingly high. The Goose remained off her eggs for three hours, and when she returned showed every sign of suspicion.



GREY LAG-GOOSE DOZING ON THE NEST.

(Copyright by Mary G. S. Best.)

On May 17th, Miss Turner again visited the nest. The wind was then due west, and therefore was not blowing directly from the tent to the bird. The latter returned after awhile and brooded.

On May 23rd, Miss Best went to the nest. There was a moderate north-west wind. The bird paid no attention to the slight sounds made in manipulating the camera, but none the less she appeared uneasy. She occasionally dozed for a moment, but each time she did so she started awake again as though suspicious of something, although the photographer in the tent had made no noise.

It seems to us that the only explanation of this bird's behaviour is, that she "winded" the photographer. On the 12th, when the wind blew from nest to tent, the Goose returned readily; on the 13th, when the wind blew direct from tent to nest, she would not come near her eggs; on the 14th, when the wind was blowing from the same quarter she was evidently most suspicious—that she returned at all, we attribute to the violence of the wind which may well have blown the scent beyond or over her. On the 17th, there was a side wind, and the Goose returned straight to her eggs. On the 23rd, again the wind blew from the tent to the nest, and by this time the bird was sitting hard and was well accustomed to the tent; but even so, as we have pointed out, she appeared suspicious of something apart from the noise of the camera, even though the photographer was able to enter the tent and set up the apparatus without scaring her from the nest. The keepers and gillies of the district declare that the geese, and also the crows, can all smell, and that it is useless to stalk them downwind.

The Grey Lag appears to be largely on the increase in the district in question, where it is carefully preserved for the shooting, and on some lochs it is possible to find half a dozen nests; but the Geese suffer a good deal from the depredations of Hooded Crows, as the nests are very conspicuous owing to the amount of down which is littered round the place. The Geese were all very late in breeding this year, many birds being found still sitting at the end of May, although they generally hatch out by the middle of that month.

DISCOVERY OF A COLONY OF TREE-SPARROWS ON INISHTRAHULL ISLAND, CO. DONEGAL.

WITH REMARKS ON THE DISTRIBUTION OF THIS SPECIES
IN IRELAND.

BY

PROFESSOR C. J. PATTEN, M.A., M.D., SC.D.

ON March 22nd, 1913—the day after I arrived on Inishtrahull Island—as I was ascending the rugged path-way which leads to the east headland where the light-house is situated, I noticed two Tree-Sparrows. As they remained perched on a telephone-wire I surmised that they were migrants resting *en route*, and having inspected them carefully I passed on. Just then however something frightened them, and as they flew I watched their course. They did not proceed far, but alighted on the slate roof of the school-house, some three hundred yards off. I hastily followed, and drawing close I found that they were quite at home here. Believing then that these birds were residents on the island, not casual migrants, I resolved to make a very careful survey of their haunts.

The next morning I made an early start, and before the natives were astir I had found quite a number of Tree-Sparrows foraging among the garbage outside the cabins. The birds frequently consorted with Rock-Pipits. From my experiences of Tree-Sparrows in many other districts I expected that they would be shy and difficult to observe.* But there was no need to rise specially early or approach them by stealth, for they were tame and hopped about the doorways almost as impudently as would House-Sparrows. Indeed they were most easily watched a little later on when the fowls (of which there were many on the island) were

* Along Dublin coast for instance, I have often noticed how difficult it is to approach the Tree-Sparrow, and Mr. W. J. Williams, for many years familiar with the habits of this bird here, remarks that "it is the wildest small bird in the country," *vide Irish Naturalist*, October, 1906, p. 236.

being fed, as the Sparrows joined eagerly in the repast. The first party which I observed this day consisted of a dozen birds. They were with a couple of Rock-Pipits outside a cabin on a manure-heap. Another party and yet another remained perched on the roofs of cabins, each party consisting of some six to nine birds. Three sat on an old chimney on the gable end of a disused cabin whose walls had for the most part remained though the roof was gone. Odd birds stood on the



[C. J. Patten, *Tele-phot.*

Tree-Sparrows on the Roof of a Cabin on Inishtrahull Island.

roof-tops of many inhabited cabins. I next proceeded to disturb all the Sparrows that I could from their shelter in thatched roofs, wall-crevices, etc., of the cabins, in order to make a rough census of the number on the island. I estimated that I saw about fifty birds. But even this was not quite all, for on proceeding up westward and inspecting the dwelling-houses at the fog-station I found a party of six Tree-Sparrows, and also ascertained that a pair were building in an eave of the roof of one of the dwelling-houses here. Indeed I saw for myself a Tree-Sparrow with a long straw in its mouth, disappear under the eave of the

house of one of Lloyd's Marconi operators. I next retraced my steps to the low-lying part of the island where the cabins are situated, to search for more breeding-sites, and in the broken walls of disused cabins I found some birds already nesting. I spent several hours inspecting groups of sparrows to see if there were any House-Sparrows present. I obtained a negative result; moreover, during the thirty-two days spent on the island I did not see a single House-Sparrow.

In their habits these Tree-Sparrows closely resemble the House-Sparrow, showing like the latter a strong predilection to remain in the immediate area of human habitations. Now and again a pair or two would fly on to an adjacent rock and often, especially on fine sunny days, the cock-bird treated us to his tuneful little song, which he kept up for quite a time.

Three Merlin hawks frequented the island, and their appearance in the air, even a long way off, generally caused the sparrows to muster together and immediately seek refuge in crevices in stone-walls, etc. On March 28th, the presence of a hawk was the means of affording me the best chance I had of estimating the numbers of Tree-Sparrows at a glance on the Island. The hawk glided past a gap between two stacks of rock, and while the Tree-Sparrows only caught sight of its form for an instant, this was sufficient to summon them all together from the house-tops. The birds meeting in the air, formed a compact flock, which flew across a ploughed field and disappeared from view by entering a cowshed. The hawk, however, was only a Kestrel and was not looking for the sparrows. Presently the Kestrel went off and I then started to evict the Tree-Sparrows from the cowshed; as they came out in couples or small parties, I had a splendid opportunity of counting them. When satisfied that I had evicted them all, I found that I had counted thirty-eight birds, and allowing for those which had secured ambush elsewhere, there must have been at least a dozen more.

At this point it is convenient to mention that the island of Inishtrahull may be divided into three areas, namely an elevated part at the west side on which is built the fog-siren, its engine-premises, etc., with dwelling-houses for two lightkeepers. Here also are situated the premises and dwelling-houses of Lloyd's Marconi operators. As already mentioned the Tree-Sparrows breed under the eaves, etc., of these premises. The second and most



[C. J. Patten, *Phot.*

Nest of Tree-Sparrow in hole in wall of disused cabin. A stone has been removed to show nest. Latter surrounded by a black ring to indicate position.

extensive area comprises all the low-lying ground in the centre of the Island. Here are some eighteen cabins with thatched roofs (save a few with slated roofs), as well as the school-house with a slated roof. This area is the main abode of the Tree-Sparrows, and they nest in quite a number of these premises. The third area rises on the east side in the form of a headland on which the Lighthouse Tower and dwelling-houses for two

lightkeepers are built. So far the Tree-Sparrows had not spread to these premises for breeding purposes. However, on April 6th, a pair appeared on the balcony of the lighthouse. I watched them for quite a long time, and observed that the male kept up a chattering chirp to his mate, now and again hopping round as though inspecting the premises with a view to nesting. On the next day they appeared and stayed three hours about the lighthouse, as well as on a few other occasions during the rest of my stay on the Island. As the species appears to be on the increase, it is quite likely it may spread permanently to this part, and when that happens the Tree-Sparrow will be found tenanting practically all the available buildings on Inishtrahull.

Having thus given a general account of my discovery and observations on this species, I shall now briefly touch upon its distribution as an Irish bird, with special reference as to when and how it came to inhabit Inishtrahull Island. The commencement of its history does not carry us far back. It was unknown to Thompson who, in Vol. I. of his *Natural History of Ireland*, p. 256, which was published in 1849, states that "The Tree- or Mountain-Sparrow (*Fringilla montana*) appears in Templeton's Catalogue of Irish Vertebrate Animals 'as a doubtful native,' but to my ornithological friends and myself is quite unknown." Watters, in his *Natural History of the Birds of Ireland*, which appeared in 1853, makes no mention of the Tree-Sparrow, albeit a year previous Montgomery showed the first Irish specimen to the Dublin Natural History Society. Subsequently it seems that this species was known only about the environs of Dublin, its principal quarters being on the north side of Dublin Bay. Here for many years Edward Williams made valuable observations especially with regard to its steady increase as a breeding-species over the county ;*

* Nestlings from Howth obtained by this zealous naturalist in 1882 are in the National Museum, *vide* More's *List of Irish Birds*, 1st ed., p. 12, 1885.

and it was through him that I first learned to distinguish this bird in the field from the House-Sparrow. The further distribution appears to have been first traced chiefly in the southern direction, for we find that in March, 1865, a male was obtained at Sandymount (*British Association Guide to Co. Dublin*, 1878), while Dalkey is also given as a locality;* both places being on the south side of Dublin Bay. In December, 1890, an example was secured near Bray on the borders of co. Dublin and co. Wicklow; six years later an exhausted specimen was found on the Tuskar Rock, co. Wexford.† In the meantime, viz. in 1886, a pair were seen frequenting the roof of a cabin on Aranmore Island, co. Donegal.‡ In regard to this observation Mr. Ussher makes the following comment: "The species cannot have established itself there, for in 1896, when I visited Aranmore with the Rev. A. Ellison, we passed an hour inspecting the Sparrows about the cabins on the island, without meeting with a Tree-Sparrow."§ I may suggest that to me personally an hour seems a very short time to allot for the inspection of sparrows on an island of such size as Aranmore; it took me the greater part of a day to inspect the sparrows of Inishtrahull, a very much smaller island, and with far less cover for the birds. Now that I have found the Tree-Sparrow so dominant a feature on Inishtrahull, the question of its occurrence on the adjacent Island of Aranmore becomes a matter of renewed interest. In 1897, Mr. Ussher published an important paper on the "Distribution of Birds Breeding in Ireland," at which date he considers that "The Tree-Sparrow, first announced in 1852, is apparently still confined to the vicinity of the Co. Dublin

* H. Blake-Knox, *Zoologist*, 1870, p. 2018.

† Barrington, *Migration of Birds*, Analysis of Reports, 1881-97, p. 126.

‡ H. M. Wallis, *Zoologist*, 1886, p. 489.

§ Ussher, *Birds of Ireland*, 1900, p. 61.

coast.”* Even as recently as the year 1900 we find in his work on *The Birds of Ireland*, the text of the article on the Tree-Sparrow runs: “Resident in one district north of Dublin Bay since 1852, and increasing there.” Now while I observed a steady increase in the numbers of Tree-Sparrows in the vicinity of Dublin for ten years previous to 1901, when I left Ireland, and also—towards the close of those years—noticed not only increase of numbers in the old quarters but also an extension of range inland from the coast,† still the subsequent markedly wider distribution of this species which became demonstrable a few years later, can hardly be the outcome of direct extension of some of the steadily multiplying members of the original co. Dublin colony: for the next colonies which were discovered were too remote from each other and from the Dublin colony to favour the view that they were established by a process of budding off, so to speak, from a common stem.‡ It does not necessarily follow that the new colonies had only recently established themselves in the area where they were first found. I shall show presently that this was not the case in regard to the Inishtrahull colony which I discovered; hence we cannot argue too positively that, prior to the discovery of the new colonies now to be indicated, the species was resident only in the vicinity of Dublin. I think the text of Mr Ussher’s article on the Tree-Sparrow would read with greater accuracy if it ran: *At present only known to be* § resident in one district north of Dublin Bay, etc. etc.

* Ussher, “Distribution of Birds Breeding in Ireland,” *Irish Naturalist*, Vol. VI., p. 71, 1897.

† For instance in 1898 I obtained a specimen from Crumlin, eight miles inland from Baldoyle, the latter place being the headquarters of the original colony (*vide* Ussher, *Birds of Ireland*, p. 60).

‡ This argument scarcely holds good in the case of the little colony of Tree-Sparrows quite recently discovered by Miss Helen M. Metcalfe, an account of which is published in the *Irish Naturalist*, for April, 1913, page 82. These birds were found at Johnston Bridge, co. Kildare, and it is as likely as not that they represent a direct extension of the original colony from the adjacent county of Dublin.

§ The italicised words are those which I suggest prefixing.

The new colonies which I now refer to were discovered (a) in the west, Belmullet, co. Mayo, in 1905; (b) in the north, coasts of Derry, 1906, and Donegal, 1907. The birds discovered at Belmullet formed a colony, as did those found on co. Donegal coast; only one pair is recorded as seen on co. Derry coast; these may likely have been an offshoot of the Donegal birds. The account of the discovery of the colony at Belmullet is mentioned in a short note by Mr. Warren.* No details are given: he only states that "an esteemed correspondent from Belmullet" discovered the colony, and on February 10th sent him a good specimen for identification. The birds which nested in co. Derry were discovered by Mr. Nevin H. Foster on August 16th, 1906.† In his interesting article he tells us this pair bred in a Sand-Martin's nesting-hole "situated near the top of an almost perpendicular cliff composed for about 60 to 70 feet from sea-level of rudely columnar basalt . . ." The birds in the colony discovered on the co. Donegal coast built their nests in holes in garden-walls about six feet from the ground. The discoverer, Mr. J. W. McWilliam, made the matter known to Mr. Robert Patterson on June 14th, 1907. The latter, in his interesting paper,‡ suggests that it is hardly "possible that these Tree-Sparrows can have been in the district for any length of time, because Mr. McWilliam, who is a close and accurate observer, has stayed in the vicinity for several summers in succession, and although he has kept a careful watch on all the Sparrows he has met, he never suspected the presence of Tree-Sparrows until he discovered the first nest on June 14th." Had this statement ended here I see no reason to comment: when however we read further, "Undoubtedly it was Mr. Foster's discovery

* "Tree-Sparrow in Belmullet, Co. Mayo." Robert Warren, *Irish Naturalist*, March, 1905, p. 72.

† "On the Nesting of the Tree-Sparrow in Co. Derry." Nevin H. Foster, *Irish Naturalist*, October, 1906, pp. 221-23.

‡ "Nesting of the Tree-Sparrow in Co. Donegal." Robert Patterson, *Irish Naturalist*, August, 1907, pp. 239-40.

in co. Derry last year that made Mr. McWilliam pay increased attention to the subject this summer," we seem to tread on debateable ground, and ask: Had the birds been breeding in the district during previous years without having been discovered, because Mr. McWilliam, while being "a close and accurate observer," had not given the *increased attention* to the subject? Debateable though this point may seem to be, I am nevertheless inclined to lean to the idea that the birds had not long colonized the spot where they were detected, because in regard to the question as to when Tree-Sparrows first appeared on Inishtrahull Island, Mr. Sulman, Chief of Lloyd's Marconi operators, tells me that as far as the dwelling-houses at the west-end of the Island are concerned, the first pair of "sparrows" of any kind observed was in the spring of 1906, a time which corresponds closely with the discovery of the Tree-Sparrow on the mainland of co. Donegal and in co. Derry, as well as in co. Mayo. Hence it is not inconceivable that a visitation of immigrants, amounting almost to a small irruption, took place about that period, Inishtrahull being visited more or less synchronously with the above-mentioned localities of the mainland of co. Donegal and other counties. Such an irruption might simply be an increase in the large numbers which, according to Saunders,* arrive from the Continent on the north-east coast of Britain every autumn, and so numbers of such birds may have spread westward to the coastlands of Ireland. At any rate the discovery of Tree-Sparrows much about the same time in so many different districts is a matter worthy of note. Returning to the observations of Mr. Sulman, he tells me that he was first disturbed by the twittering of "sparrows" in the early mornings above his bedroom window in the spring of 1906, and noticed shortly afterwards that the birds had taken up their quarters under the weather-boards of his house. A few weeks later these "sparrows" were observed carrying

* Saunders, *Manual of British Birds*, 2nd ed., 1899, p. 181.

pieces of straw, etc.; and eventually they built their nest and reared their young. He tells me that the birds appeared very tame, and made a practice of sitting on the clothes-lines and walls, waiting for the fowls to be fed. When the food appeared they flew down and joined in the repast. In 1907 a second pair took up their quarters and bred under the weather-boards of the next house. In subsequent years the numbers breeding about these premises had increased: in March 18th, 1913, Mr. Sulman saw twelve birds perched on the railings of his house, waiting to purloin some of the fowls' food. He frequently observed similar numbers this spring consorting with the fowls. With regard to the houses themselves, Mr. Sulman states that there were none erected at the west-end of the Island until 1901 and 1903. The premises are slate-roofed, with weather-boards at their ends; the walls are of cement, roughly dashed with small pebbles. The school-house, also slate-roofed and dashed, was built in 1901. The fog-signallers' dwellings are flat-roofed and were not erected until 1905. It is thus quite evident that the Tree-Sparrows could not have bred about these premises longer than twelve years; but, according to Mr. Sulman's account, some of the houses were erected five years before sparrows selected them for breeding-sites.

So much then for the evidence of the Tree-Sparrow's first appearance at the western extremity of the Island. There still remains the question to be answered: had they inhabited the thatched roofs of cabins in the valley of the Island before that time? On questioning the natives I gleaned but little information, in fact some of the statements were conflicting. I was informed that the sparrows and the Marconi operators with their big houses all came together; that the birds had been only a few years on the Island; that they were always there, but not especially noticed until I came. Asking them if they ever noticed larger sparrows, they

said no, and the reason the birds were smaller than those on the mainland was because they had less to eat and poorer stuff!! Speaking generally most of the natives seemed to think that sparrows frequented their cabins as far back as they could recollect. Now, if we favour this last assumption the matter is full of interest, for if the Tree-Sparrow is only of recent importation and yet sparrows have perennially inhabited the island, it follows as a corollary that the Tree-Sparrow completely supplanted its larger congener the House-Sparrow. I hardly think such is likely; and yet Mr. Ussher in his *Birds of Ireland*, in writing his article on the House-Sparrow, p. 59, states that it "breeds on *all* the inhabited islands of the *north* and west." If Mr. Ussher actually proved this point by personal investigation, or by obtaining specimens of House-Sparrows from Inishtrahull prior to 1900, when his book was published, then the question of the smaller species supplanting the larger at a subsequent period cannot be summarily dismissed. If on the other hand Mr. Ussher merely assumed that the House-Sparrow frequented Inishtrahull (an assumption one might be tempted to make on account of the considerable numbers of House-Sparrows which, I understand, frequent the more or less adjacent islands of the north coast, viz. Tory and Rathlin), it may in reality have been the Tree-Sparrow, not the House-Sparrow, which inhabited Inishtrahull Island when Mr. Ussher's book was published. Curiously enough Thompson* makes no mention of Inishtrahull when dealing with the distribution of the House-Sparrow, yet he says that "these birds are very common in the Island of Rathlin (Dr. J. W. Marshall), and in August, 1845, several were observed about the Round Tower and neighbouring cottages in Tory Island (Mr. Hyndman)." Personally I am rather surprised at the absence of the House-Sparrow from Inishtrahull, for it is abundant on the adjacent

* Thompson, *Natural History of Ireland*, Vol. I., 1849, p. 256.

mainland, e.g. about Malin Head. Certainly Tory, Aranmore, and Rathlin should now be thoroughly surveyed for the purposes of investigating the presence of the Tree-Sparrow on these islands also. They are much larger islands than Inishtrahull, hence there is ample room for both Tree- and House-Sparrows to dwell together in harmony and obtain adequate food and shelter.

In conclusion, having now brought the interesting fact to light that the Tree-Sparrow is a dominant feature of bird-life on Inishtrahull Island, one wonders, if it goes on increasing as it apparently has been doing, whether it will continue to hold its own against its enemies: for while free from human molestation, which must largely account for its tameness, it doubtless falls a prey to Merlin hawks, and cats. I understand that the latter were brought over to the Island some time ago to suppress an outbreak of mice; the mice have materially diminished in numbers, but the cats have remained, and as their owners practically never eat meat or fish (the latter being shipped off and sold as soon as possible), it is evident that these animals cannot depend for their living on what they may be presented with or may purloin from their owners. Hence it is more than likely that many Tree-Sparrows which assemble round the cabin-doors become, from time to time, an easy prey to the feline domestic. There is practically a cat in every cabin, and from the activity displayed by these animals as they dart up rocky pinnacles or descend the face of precipitous cliffs to the water's edge in pursuit of birds, I should say that their environment here has brought into play the predatory instincts, handed down by their wild ancestors, in a marked degree.

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NOTES

MIGRATION OF BRITISH WINTER-VISITANT STARLINGS.

THE following two records of marked Starlings have so far not been published except in the German reports :—

Vog. Rossitten No. 108 : marked in the nest on June 10th, 1909, at Lidsen, near Wolmar, Livonia, Russia. Obtained about March 20th, 1911, at Farnley, Yorkshire (Thienemann, *Journal für Ornithologie*, 1912, p. 160).

Vog. Rossitten, No. 4116 : marked in the nest on June 10th, 1911, at Lidsen, Livonia. Shot on December 26th, 1911, near Buckfast Abbey, south Devon (Thienemann, *Journ. f. Orn.*, 1913, Sonderheft, p. 58).

While on this subject it seems desirable to quote the references to similar cases : Starling marked in Denmark, 1904, caught in East Lothian, March, 1906 (Mortensen, *Dansk ornith. Forenings Tidsskrift*, 1907, p. 152) ; marked in Denmark, October, 1911, and recovered in Norfolk, November, 1911 (*British Birds*, V., p. 187).

The records of movements of birds marked in Britain in winter are most interesting when compared with the above. They are : the B.B. Berkshire to Finland record (*antea*, Vol. VI., p. 13), two Aberdeen University, Scotland to Arctic Norway records (*antea*, Vol. V., pp. 101, 129), and another here published for the first time :—

Aberdeen Univ., No. 16479 : caught and marked at Edinburgh, March 18th, 1911. Recovered at Vaerdalsören, prov. Trondhjem, Norway, 5th April, 1913 (information in *Sandefjords Blad*, 6.V.1913 : ring and fuller details sent later by Mr. A. M. Elstad).

Further, there is a record of a Starling with a ring marked "U.S. Edinb. 102," obtained in Denmark in April, 1910, but never claimed (*Ann. Scot. N.H.*, 1910, p. 248).

A. LANDSBOROUGH THOMSON.

LINNETS NESTING ON THE GROUND.

IN June, 1912, we found the nest of a Linnet (*Carduelis c. cannabina*) among the growth overhanging a small muddy creek in the neighbourhood of Port Victoria on the Kentish coast. The nest contained five eggs and was considerably below the level of the ground. Again this year, June, 1913, another nest containing five eggs was found by us within

a few yards of the same spot. In this case the nest was on the ground in a bunch of similar tangle, and in both instances the bird was seen at the nest.

CLIFFORD BORRER.

GEORGE BAYNES.

[Near the coast it is not uncommon to find Linnets breeding among the tussocks of coarse grass and among the sand-dunes. References to cases of this kind will be found in the *Zoologist*, 1868, p. 1319 (Spurn Pt.) ; 1902, p. 60 (near Rye), and 1904, p. 250 (Littlestone). In the *Birds of Kent*, p. 156, it is stated that "at Littlestone and Camber it nests freely on the ground in the clumps of marram grass."—F.C.R.J.]

COCK HOUSE-SPARROW ASSISTING TO INCUBATE.

ON May 25th, 1913, I noticed a cock House-Sparrow (*Passer d. domesticus*) in a nest about six feet from the ground. Wondering if the bird was incubating or brooding, I caught it on the nest, and found that it had been incubating three eggs which were within about forty-eight hours of hatching. This is the first proof I have obtained of the cock House-Sparrow helping to incubate, although I have known instances of brooding even when only part of the eggs were hatched.

J. H. OWEN.

[Although Naumann distinctly states (*Vögel Mitteleuropas*, III, p. 366) that the eggs are incubated by both sexes in turn, the experience of most naturalists is that the female is always found on the eggs. More observations are evidently needed on this point.—F.C.R.J.]

RED-THROATED PIPITS IN SUSSEX.

ON May 22nd, 1913, a couple of adult male Red-throated Pipits (*Anthus cervinus*) were obtained at Hooe, Sussex, and were examined by me in the flesh on May 23rd. The colour of the neck and breast was distinctly of a rusty-red, and the feathers on the back and rump had dark brown stripes, as described in Dr. N. F. Ticehurst's *Birds of Kent*. The under tail-coverts of one had brown stripes, but these were absent in the other specimen.

H. W. FORD-LINDSAY.

GOLDCREST NESTING IN NORTH ANGLESEY.

As the Goldcrest (*Regulus r. anglorum*) had not at the date of publication of my *Vertebrate Fauna of North Wales* been identified as resident in North Anglesey, it may be worth noting that on May 14th, 1913, Mr. W. Glynne Edwards found a half-built nest in Llynnau Wood near Holyhead, and saw both the birds. On visiting the place three weeks

later he found the nest still incomplete, and as it was evidently deserted he cut it down and sent it to me for identification. It is undoubtedly a Goldcrest's, and shows that the species is resident in North Anglesey to some small extent. Its scarcity there is due to the fact that there are hardly any woods in that district, whilst what woods there are, are of very small extent and contain few conifers such as the Goldcrest loves.

H. E. FORREST.

MISTLE-THRUSH REMOVING DEAD YOUNG.

ON April 26th, 1910, shortly after 6 p.m., as I was leaning over the garden gate at Corsemalzie (Wigtownshire), a bird, which I thought at the moment was a Sparrow-Hawk, flew out of the wood beyond, carrying something in its feet. Coming on steadily it dropped its burden when about a foot above the ground, and alighted some ten yards from me on the grass. I saw then to my surprise that it was a Mistle-Thrush (*Turdus v. viscivorus*). On catching sight of me it flew away, calling harshly. On going to the spot I found a dead young one some eight days old, and a short search in the wood whence the bird emerged revealed the nest in an old Scotch fir containing three live young of a like age. The old bird had flown some forty yards with the dead young one, and I think this considerable distance and the method of carrying are worthy of note.

J. G. GORDON.

WHINCHAT BREEDING IN CO. CORK.

IN the *Hand-List of British Birds* recently published, certain Irish counties are given as those in which the Whinchat (*Saxicola r. rubetra*) is reported to have bred, and among these Cork is not included. It may therefore be of interest to place on record that I found a pair of these birds breeding, on May 15th, 1911, close to Loughaun Creek, on the south side of Bantry Bay in that county. The nest was not located, but the old birds were feeding young which were skulking in the herbage. The date is undoubtedly early for young Whinchats to be found out of the nest in this country. Stonechats also, at the same place and at the same time, had fully-fledged young.

J. H. STENHOUSE.

NEST OF WHINCHAT IN A CAN.

ON May 16th, 1913, in Chatham Dockyard Extension, a wilderness of rough grass, bramble bushes, reedy ponds, deserted huts, and rubbish-heaps, I found the nest of a Whinchat (*Saxicola r. rubetra*) in an old can. As I approached

the place, I noticed a Whinchat flying across my path and a little later spied the nest. This contained six eggs slightly incubated. The hen returned and flew round quite close to me. The can, which had probably held paint at one time, was about a foot long, and was lying at the end of a collection of old iron articles of all kinds which had been dumped down at that place. There was a little herbage growing round it and it was slightly buried in the soil, but still the nest was easily discoverable by anyone walking by; the cavity, however, could not be seen into on account of its distance back. The nest had a foundation of moss and was made of grasses lined with finer grass and rootlets. Such a site for a Whinchat's nest is, I think, quite extraordinary.

J. H. STENHOUSE.

NIGHTINGALES IN SHROPSHIRE.

THE present season has witnessed an influx of Nightingales (*Luscinia m. magarhyncha*) into localities in Shropshire where they do not occur regularly. I have located six pairs within a few miles of Shrewsbury—two at Betton, one at Bomere, one (or two) on Pulley Common, one at Hanwood, and one at Yockleton. These localities are in a line running east to west about three miles south of the county town. Pulley has often been favoured with similar visits before, but the other places only rarely. Another pair has been identified by Mr. Walter Marchant in a locality far from any known haunt of the Nightingale, namely at Weston Park, near Shifnal, the seat of Earl Bradford. The male was first heard about May 15th and sang regularly for nearly a month. It often sang by day close to some woodmen who were at work. On June 12th Mr. Marchant saw both the birds; they came within ten yards or so, uttering the shrill purr which Nightingales make when the nest is approached. He had not time to search for the nest, but had not a doubt that there was one in the plantation where the birds lived. The above is the only instance of the species occurring in north-east Shropshire that has come under my notice during the twenty years I have kept the county records.

H. E. FORREST.

CUCKOO DEPOSITING EGG AMONG INCUBATED EGGS.

On June 4th, 1913, during the annual outing of the Felsted School Scientific Society, an egg of a Cuckoo (*Cuculus c. canorus*) was found in the nest of a Reed-Warbler (*Acrocephalus s. streperus*) at Diss in Norfolk. The Cuckoo's egg was practically fresh (not infertile or addled) while the

three Reed-Warbler's eggs were not far from hatching. I had a case in 1910 of a Cuckoo depositing an egg in a Hedge-Sparrow's nest which I had under observation, three days after the Hedge-Sparrow had begun to sit. The Hedge-Sparrow had five eggs and the Cuckoo removed two when she inserted her own.

J. H. OWEN.

LITTLE OWL BREEDING IN NOTTINGHAMSHIRE.

As the Little Owl (*Athene n. noctua*) does not seem to have been yet recorded as breeding in Nottinghamshire, it is worth noting that my son took a young bird just able to fly and two eggs, very slightly incubated, on May 12th, 1913, at Gonalston. They were in a hole in a tree about three feet from the ground.

CHAS. E. PEARSON.

LARGE CLUTCHES OF EGGS OF TAWNY OWL.

THE Rev. F. C. R. Jourdain's remark that sets of five eggs of the Tawny Owl are quite rare (*cf. antea*, p. 18), will doubtless bring to light further records of large clutches, and in this connexion the following particulars of the nesting of this bird may be of interest:—

Date.	Locality.	No. of eggs in clutch.	Position.
12 March, 1904	Kent	5	Nesting-barrel No. 1
18 „ 1905	„	4	„ „ 2
17 „ 1906	„	5	„ „ 3
19 „ 1907	„	4	Hollow elm-branch, open to the sky.
15 „ 1908	„	4	Nesting-barrel No. 3.

All the above nests were within a radius of 150 yards, and I believe that they belonged to the same pair of birds.

The clutch found in 1904 was laid within three weeks from the time the barrel was placed in the tree.

In one year, when the first eggs were disturbed, a second clutch was produced, and I subsequently saw, on several occasions, one of the old birds accompanied by five owlets.

At another time I found what I believe to be the same hen-bird on her eggs. She was in a long, horizontal hole in a walnut-tree, and as this bird was a particularly close sitter, I could only count the eggs by slipping my hand beneath her. She certainly had four eggs and may have had five, but the length of the nesting-hole prevented my ascertaining definitely. The bird sat with her head towards the entrance of the nesting-hole, and whilst I was endeavouring to count her eggs, she constantly "nibbled" my bare arm with her beak, much in the same manner as a tame parrot will sometimes display affection.

It will be noticed that this bird seldom occupied the same nesting-site twice: a fact that may be due to the Jackdaws, which were most persistent intruders and whose nests I sometimes omitted to remove from the Owls' nesting-sites.

EDWARD EARLE.

[It is characteristic of the Tawny Owl not to use the same site in consecutive years, *as long as other nesting-places are available for the purpose*. When breeding-places are scarce the same hole may be occupied year after year.—F.C.R.J.]

TUFTED DUCK BREEDING IN ESSEX.

ON June 11th, 1913, I found the nest of a Tufted Duck (*Nyroca fuligula*) containing eight eggs at Walthamstow Reservoirs. The nest was situated on the bank of one of the reservoirs in the midst of long, dense grass. Although for some years my friends and I have searched this ground this is the first nest we have found, but we have previously seen two broods of young birds.

Considerable numbers of both sexes of this duck frequent these reservoirs through the whole year. On June 16th I counted eighty-seven, male and female, on one reservoir alone and, as one would expect, the number is augmented in winter.

The presence of these ducks throughout the breeding-season is somewhat of a mystery, as apparently very few breed, for we have found only one nest and two broods of young birds; moreover the females may be seen in company with the males when incubation should be taking place. The question arises, are nearly all these birds sterile? I should be interested to hear if other colonies of the Tufted Duck are known to be similarly affected, and if so, what the explanation is.

WILLIAM E. GLEGG.

FULMAR PETREL BREEDING IN CO. KERRY.

THE rapid extension southwards of the breeding-range of the Fulmar Petrel (*Fulmarus g. glacialis*) is exemplified by its occurrence this year on the Great Skellig (seven hundred and ten feet high) off co. Kerry, latitude about $51^{\circ} 48'$. The Lightkeeper, Mr. McGinley, on May 26th, 1913, reported twelve pairs breeding, and desiring corroboration I wrote for one egg, which I have received to-day, June 24th.

RICHARD M. BARRINGTON.

[For notes on the first breeding of the Fulmar Petrel in Ireland, see Vol. V., p. 141, and Vol. VI., p. 165.—EDS.]

GREY PLOVER IN THE OUTER HEBRIDES.

ON June 10th, 1913, while bird-watching off the island of Eilean Mor, in the Outer Hebrides, the weather being fine and settled and the wind north-westerly, I saw a Grey Plover (*Squatarola squatarola*), in adult-plumage.

MAUD D. HAVILAND.

[The Grey Plover has been very rarely recorded at any season from the Outer Hebrides.—EDS.]

LAPWING'S NEST WITH FIVE EGGS.

ON March 12th, 1913, I found a nest of a Lapwing (*Vanellus vanellus*), containing five eggs, near Oswestry, Shropshire. This is only the second time I have seen five in a nest. Four of the eggs were placed in the usual manner and the fifth at a corner of the square. By the colour and markings I should say all the eggs were laid by the same bird.

J. H. OWEN.

[Clutches of five in the case of the Lapwing have been so frequently recorded, that the fact may be regarded as definitely proved. Besides the two cases mentioned above, other instances will be found in the *Zoologist*, 1887, pp. 267 and 349; 1906, p. 316; and *British Birds*, Vol. II., p. 136, etc. I have also seen nine clutches of five eggs in private collections, which are not recorded above. Although the similarity in markings in many of these cases points to their having been laid by the same bird, and in one case at least one egg was a dwarf, the best evidence that one female may occasionally lay five eggs is contained in a notice of a clutch of five eggs, all of which were abnormally small, mentioned in the *Record of the Caradoc and Severn Valley Field Club* for 1901. Nests with six eggs are far rarer, and in this case are probably due to two hens laying in the same nest. One instance is referred to in the *Record* just mentioned for the year 1902, and I have seen another in a private collection.—F. C. R. JOURDAIN.]

NEST-MAKING BY LAPWINGS.

ALTHOUGH the method of nest-building by the Lapwing has doubtless been recorded before, the following observations which I made of a pair actually engaged in making their nest may be worth noting. They had chosen a grass-field. The actual spot selected was stripped bare of grass (presumably by the birds, as many bits of dead grass lay all round) and both cock and hen assisted in making a depression by clearing the earth away by scraping and pecking. It was then

neatly rounded off, by the hen only, by means of pressing her breast into the hollow and turning constantly round and round, always from left to right. She was still turning when I disturbed her. The unfinished nest on examination proved to be fully an inch and a half in depth. The birds were not far from where I lay concealed behind a hedge; and as I was using Ross glasses of 12 power, their every movement was perfectly clear, and the longer crest of the male very noticeable.

LEWIS R. W. LOYD.

SPOTTED SANDPIPERS IN SUSSEX.

ON May 23rd, 1913, I was shown a specimen of the Spotted Sandpiper (*Tringa macularia*) which had been shot the previous day at Pevensey Sluice, Sussex. It was a male in full summer-plumage. Another specimen which accompanied it was not obtained until May 24th, and proved to be a female.

H. W. FORD-LINDSAY.

REDSHANK NESTING IN SOMERSET.

I FOUND the nest of a Redshank (*Tringa totanus*) with eggs on May 25th, 1913, by the side of a large pond in a certain spot under the Mendip Hills in Somerset. I am not aware that there is any positive record of the nesting of the Redshank in Somerset, although it has been suspected of doing so.

D. MUNRO SMITH.

[The Rev. F. L. Blathwayt (*Vict. Hist. of Somerset*, I., p. 159) says: "I have evidence that a pair have nested quite recently on Steart Island, and it seems probable that the bird occasionally rests elsewhere in the county."—EDS.].

BLACK TERN IN THE OUTER HEBRIDES.

ON May 31st, 1913, while watching birds round the coast of Eilean Mor in the Outer Hebrides, I saw a Black Tern (*Hydrochelidon n. nigra*) flying in a westerly direction. I was within sixty yards of the bird which was flying low down against a strong wind. I went down to the end of the promontory off which I had last seen it, and waited some time, but it did not re-appear. A few minutes later, on returning to the spot where I had seen the bird, I saw a second Black Tern flying in the same direction as the other had done. I had a good look at it through x8 glasses, and even attempted a snapshot with a reflex camera that I had in my hand, but the result is unfortunately too small to be worth anything. The light was good there being brilliant sunshine, but a violent south-west gale was blowing. The previous day we had a storm of wind and rain from the same quarter. I am inclined to think that there were

two birds, and that it was not a case of seeing the same bird twice.

MAUD D. HAVILAND.

[The Black Tern has not been previously recorded from either the Outer or Inner Hebrides.—EDS.]

CASPIAN TERN IN SUSSEX.

A FINE example of the Caspian Tern (*Sterna tschegraya*) was obtained in Rye Bay on June 4th, 1913. It was no doubt attracted into the bay by the very large shoals of mackerel which could be seen on the surface of the water.

I examined it in the flesh on June 5th, and it proved to be a male in full summer-plumage. The bill was a bright coral red; legs and feet, blackish; extreme width of wings, 4 ft. 2½ in.; length from point of bill to end of tail, 1 ft. 9 in.; weight, 25 ounces. It had been feeding on mackerel.

H. W. FORD-LINDSAY.

SCANDINAVIAN LESSER BLACK-BACKED GULLS IN NORFOLK AND SUFFOLK.

I AM able to place on record at least two definite occurrences of the Scandinavian Lesser Black-backed Gull (*Larus f. fuscus*) on the east coast. The first one I identified in the Rev. Julian Tuck's collection, an adult in full summer-plumage which he shot about August 22nd, 1881, at Aldeburgh, Suffolk; the second is in the possession of Mr. Saunders of Yarmouth, and was shot, so he informs me, on Yarmouth beach on May 30th, 1887. I am fairly certain that I have seen this race here at Lowestoft during the autumn migration on more than one occasion.

Although Howard Saunders in his *Manual* writes of the Lesser Black-backed Gull as a resident, in my experience on the Sussex, Kent, and Suffolk coasts it is entirely a spring and autumn bird of passage, and during nearly twenty years I have *never* seen one in winter for certain. If there are parts of Britain, as I have been told, where it occurs in winter, it would be interesting to know to which race the birds belong. Perhaps some other readers will give their experiences of the status of this bird.

CLAUD B. TICEHURST.

ALBINISTIC LAPWING.—On May 24th, 1913, in the Outer Hebrides, I observed an albinistic Lapwing (*Vanellus vanellus*) nesting among half a dozen normal pairs. The bird, which was a hen, was mated to a normally-coloured bird and had young. Her crest and throat and the tips of the primaries were black, and the tail-coverts, bill and feet were coloured as usual, but the rest of the plumage was of a very pale grey.—MAUD D. HAVILAND.

REVIEWS

X. and XI. Jahres-berichte (1910 and 1911) der Vogelwarte Rossitten. J. Thienemann. *Journal für Ornithologie*, 1911, pp. 621-707, and 1912, pp. 133-243, 431-470; and Sonderheft, 1913.

THE reports of the Rossitten station are increasing in bulk, and each of the two latest reports lying before us is subdivided into two parts. The first part of the 1910 report contains the usual classified summary of the year's local observations. Some idea of the magnitude of the migration phenomena at Rossitten may be gathered from the fact that the most extraordinary "rush" the present writer (re-visiting Rossitten in that season) has ever seen, is dismissed with the words, "3. Oktober: Starker Krähenzug"! The second part concludes with an elaborate summary of records of Woodcock-migration in East Prussia, West Prussia, and Posen in the autumns of 1909 and 1910 (also issued separately). The rest of Part II. consists of marking-records. The most important of these is the summary of the Stork-records (with maps), but this was published earlier as a separate paper, and has already been noticed here (Vol. IV., p. 357). Other interesting records are those of a Black-headed Gull marked as a nestling at Rossitten July 16th, 1908, and recovered as a *breeding* bird in Russian Kurland (150 km. distant), May 16th, 1910; and of Spoonbills marked in Holland and recovered respectively at the mouth of the Seine and at St. Puy in southern France, the latter at the beginning of August in the summer of marking.

The first part of the 1911 report contains instead of the usual classified summary of records, a journal of observations kept at the little observation-hut at Ulmenhorst, near Rossitten, during the best of the spring and autumn movements. The account is interesting, and meteorological data are added. A few pages of South German records contributed by a Heidelberg correspondent are valuable for comparison.

Part II. contains many interesting marking-records. The new Stork recoveries include cases from the Mbomu-Ubangi basin (north Congo) and German East Africa, the total of African records having now reached twenty-four. The most southerly is a new one from the Victoria East district of Cape Province (32° 46' S. lat.). One previous case of a

west German Stork migrating to south-western instead of south-eastern Europe had been recorded (*cf.* Vol. IV., p. 359), but now there are both Dutch and west German south-easterly migrating cases, and one case of a Stork migrating from Freiburg to Basses-Pyrénées; there is evidently no sharp boundary between the breeding-areas of birds following these divergent routes. The point is an important one.

Other records are: Three Hooded Crows are recorded after intervals of over six years; a number of Black-headed Gull records, including the already famous Barbados case (*cf.* Vol. V., p. 317), and recoveries from England, Hungary, Croatia, Switzerland and (marked at Munich) Tunis—one of the Swiss cases being of a Rossitten-bred bird at Zurich in June two years later (breeding?); two Lesser Black-backed Gulls caught and marked at Rossitten in autumn were reported, five and three weeks later respectively, from Saxony and Servia; a young Woodcock marked near St. Petersburg on July 3rd, 1911, was shot on December 12th, 1911, in Dept. Gers, south-western France; a Wood-Pigeon marked in the nest at Dresden was recovered five months later in Dept. Lot-et-Garonne, south-western France; a Rough-legged Buzzard marked in the nest in July in northern Swedish Lapland was shot four and a half months later near Vienna; an Eagle (*A. pomarina*) marked in Russian Kurland, in July, was shot two months after in southern Bulgaria.

A discussion of certain movements of the Red-footed Falcon concludes the Report.

A.L.T.



LETTERS



SUPPOSED LITTLE BITTERN IN SHROPSHIRE.

To the Editors of BRITISH BIRDS.

SIRS,—For exactly a fortnight—May 14th to 27th, 1913—a mysterious bird was heard calling from the marshy border of Betton Pool, near Shrewsbury. Cartwright, the keeper, an observant man, who is familiar with the notes of all the ordinary water-fowl (which resort to the pool in considerable variety) reported it to me as something entirely different from any bird-note he had ever heard. I went down there several times, and on one occasion (23rd) was fortunate enough to hear the bird call repeatedly. This was between 9 and 10 p.m. The note sounded like “Cuc-cuc-cuc-cuc-gwrr”; the last syllable drawn out and guttural in tone. The number of “cucs” varied from three to five. The call was fairly loud, but the long final note the loudest, so that at a distance this alone would be audible. The bird seldom began till dark, but on two days it began about 8 p.m. It often kept calling intermittently all night long. On the 25th, Cartwright and I went with the punt and searched carefully the marshy covert where it seemed to stay; first silently and then trying various stratagems to alarm it and make it take wing. All in vain, however, and the bird finally disappeared without anyone having had even a glimpse of it. The last time it was heard was on the night of May 27th. I have searched all my available ornithological works, and can find only one species that at all answers to the description—the Little Bittern (*Ardetta minuta*). I should be glad of suggestions from other ornithologists, especially any who may have had actual acquaintance with the Little Bittern in other countries. I may add that the species is known to have occurred six times in Shropshire.

H. E. FORREST.

SHREWSBURY, *June 3rd*, 1913.

[The note of the Little Bittern seems to me to bear a very close resemblance to the noise made by a man driving a pile with a wooden mallet. Generally about three blows seem to be given at short intervals, and then a pause takes place before the noise is renewed.—F.C.R.J.]

SMALL CLUTCHES OF EGGS.

To the Editors of BRITISH BIRDS.

SIRS,—At the beginning of the nesting-season I was struck with the “shortness” of the clutches laid by birds this year, and have since made a note of the contents of nests I have found, with the following, to me, remarkable results. All the nests were watched for some time and the clutches are all complete.

<i>Bird.</i>	<i>Number of Nests.</i>	<i>Eggs in Clutch.</i>
Rook	7	Four each.
Thrush	—	Never more than four; several three.
Blackbird ..	—	Never more than four; several three; two of two.
Redbreast ..	11	Two of five; two of three; remainder four.
Stonechat ..	4	One of five; one of four; two of three.
Herring-Gull ..	—	Mostly two; several only one.
Hedge-Sparrow ..	—	Four in each.
Lapwing	—	More threes than fours; three one only.
Chaffinch	14	One of five, four of three; remainder fours.
Chiffchaff	2	Five and four.
Willow-Warbler ..	6	One of six; two of five; three of four.
Magpie	3	Two of four; one of one only.
Yellow Bunting ..	5	Four of three; one of two.
House-Sparrow ..	—	One only of five; remainder fours or threes.
Wren	4	One of six; one of five; one of four; one of three.
Swallow	4	One of four; three of three.
Bullfinches, Whitethroats and Lesser Whitethroats	—	All fives.

It is a matter of universal complaint among the local farmers and others that hens and ducks, especially the latter, are all laying very “short.” The figures taken as a whole seem so very much below the average, that I thought they might be worth recording.

LEWIS R. W. LOYD.

BEER, DEVON.

THE SINGING OF BIRDS ON MIGRATION.

To the Editors of BRITISH BIRDS.

SIRS,—I can quite bear out Mr. Headley's experience that some birds sing while on migration, and surely the autumn-song of the Willow-Warbler and Chiffchaff heard in places where they are undoubtedly halting on migration, must be familiar to most field-ornithologists. The Golden Oriole I have heard singing in Egypt during a halt on migration in spring. The Rufous Warbler of course is a *spring-visitor* to the Nile Delta, breeding abundantly there, and not, so far as I am aware, wintering there.

CLAUDE B. TICEHURST.

LOWESTOFT, *June 22nd*, 1913.



Melhuish, *Phot.*
July, 1892.

[B.B., Vol. VII., Pl. 2.]

D. L. Sclater

Born November, 1829.

Died June 27th, 1913.

BRITISH BIRDS

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THE LATE PHILIP LUTLEY SCLATER.

(PLATE 2.)

WE greatly regret to announce the death, on June 27th, 1913, as the result of a carriage accident, of Philip Lutley Sclater, D.Sc., F.R.S., at the age of eighty-three years. The loss of so eminent an ornithologist will be deeply felt by all bird-lovers, and by none more than the Members of the British Ornithologists' Union, and the British Ornithologists' Club. He was one of the founders of the former, and the first Editor of its Journal, *The Ibis*—a labour of love which he undertook, with only one break, until a year ago; of the latter he was Chairman from its institution, while he took the greatest interest in its proceedings, and was seldom absent from its meetings. As Secretary of the Zoological Society from 1859 to 1902, animals in general became his care, while his able conduct of the publications of the Society and careful building up of its magnificent library, will never be forgotten by zoologists. In this important position he was able to exercise a great and beneficial influence on the welfare of Zoology, and many a young man has owed his start in life to Sclater's kindly assistance. To all who applied to him, his help was freely given in the promptest and most efficient manner, and Science owes him a deep debt of gratitude, as most of us have reason to remember. Moreover, the loss will be felt—not only in our country but abroad—by his many friends and correspondents, and perhaps most of all in America, with the avifauna of which he was so familiar.

As is well known, the special branch of the subject to which Sclater devoted his earlier years, was the study of Central and South American birds, of which he made a very fine collection, now in the British Museum. Many of his writings of that time had reference to them, and his volumes of the British Museum Catalogue dealt with them alone. But our space will not allow us to

give a full list of his innumerable papers or even larger works, for which the reader must be referred to Bulletin No. 49 of the United States National Museum ; shorter details will be found in the Jubilee Volume of *The Ibis*, and in the forthcoming number of that periodical. He was always a keen observer of British birds, both at his home in Hampshire and elsewhere, and a warm supporter of any project for their preservation.

Sclater's greatest claim to the gratitude of posterity will by many be considered his work on Geographical Distribution and Classification. As early as 1858 he began to consider the first of these subjects, and before long formulated his views, suggesting the division of the world (from ornithological considerations) into the six regions now very generally accepted : Palæarctic, Ethiopian, Indian, Australian, Nearctic and Neotropical. Later he wrote, with his son William, on the geographical distribution of mammals, while in 1880 he propounded a Classification of the Class "Aves" in the pages of *The Ibis*.

Sclater was born at Tangier Park in Hampshire, in November, 1829, and belonged to the old county family now represented by his nephew, Lord Basing ; he was educated at Winchester and Oxford, where he was a Scholar of Corpus Christi College and took a first class in Mathematics. At Oxford he made the acquaintance of Strickland and Gould, but after obtaining his fellowship he soon left for a prolonged tour in America and Canada, including the backwoods from Lake Superior to the Mississippi. He met on this occasion the great New World Ornithologists, Cassin, Baird, and Lawrence, while previously in France he had become a great friend of Prince Charles Bonaparte. Visits to North and South Africa and the Continent generally took place later in his life. In 1860 Sclater received the honorary degree of Doctor of Philosophy from the University of Bonn and in 1901 was made a Doctor of Science by the University of Oxford. He was one of the General

Secretaries of the British Association for five years, and presided over Section D at Bristol in 1875. He was elected a member of the Royal Society in 1861 and twice served on the Council, and was a member or fellow of many other learned societies at home and abroad ; but in the midst of all his work he found time for country pursuits (especially hunting), and held the position of an active magistrate at Odiham, where he spent the latter part of his life.

He leaves a widow, three sons, and a daughter.

A. H. EVANS.

THE SEQUENCE OF PLUMAGES OF THE COMMON EIDER.

BY

J. G. MILLAIS.

MANY accounts have appeared in the works of naturalists on the subject of the plumage of the male and female Eider (*Somateria m. mollissima*) and the age at which the sexes arrive at maturity. In nearly all of these there is much guesswork owing to the small series of specimens examined, although in several of the accounts it is stated correctly that the male bird becomes adult in its third year.

So long ago as 1756 we find the description of the typical (Swedish) Eider by M. Thrane Brännich, who, roughly, yet accurately, states that it is not until the third year that the male "in all things resembles the adult male" and "they do not pair until the third year unless through an irregularity or an occasional wantonness." With his description of the plumages of the immature female I cannot agree, for he states that "During the first year the female bird alone attains almost the same plumage as the mother bird, the only difference being that they are somewhat lighter," etc. Later, in his Supplement III., he states that the two white bands on the wings do not become distinct until after several years' moulting. This is somewhat contradictory. Various authors such as Nilsson, Lilljeborg, and M. von Wright, all give descriptions of various stages of the plumage, but in no way seem to come to definite conclusions. Faber (*Prodromus der isländisch. Ornith.*, p. 70, 1822) says that the male bird is not capable of procreation until its fifth summer and that it retains its youthful plumage four years. Kjaerbölling (*Skandinaviens Fugle*, p. 691) thinks that in the first and second year the male bird lacks the beautiful markings on the head, and the white is entirely absent on the neck or begins on the throat. Brehm, too (*Handbuch der Naturgeschichte aller Vög. Deutsch.*), is equally inaccurate

in his statements about the age when the male gets its full plumage. After Brännich, Holböll (*Ornith. Beitrag zur Fauna Grönlands*, pp. 69-73) seems to have been the next author who diagnosed the plumage-change of the Eider correctly. On page 72 he says that, having compared a great number of young birds of both species (*S. mollissima* and *S. spectabilis*), he has come to the conclusion that both require two years to become full grown, so that young birds which were hatched in 1840 were full grown in the autumn of 1842 and had attained a complete winter-plumage in October.* This period, he states, is alike for both sexes. During the first year the female bird is quite grey, without the white bands on the wings; in the second year she attains almost the same colour as the old birds, only differing from these by the absence of the white bands on the wings. Professor Collett gives (*Mindre Meddelelser ved. Norges Fuglefauna*, 1881-1892, pp. 284-286) a detailed account of the plumage-change which seems to leave the reader in a state of some doubt, for he believes that the young males do not begin to turn white until the second winter. Most English authors, except Booth, say very little about the plumages of the Eider, and what they do is strictly of a non-committal order. By far the best account of the sequence of plumages of *S. mollissima* and its allied races is to be found in Mr. E. Lehn Schiöler's paper on the Eider Duck (*Somateria mollissima* L.) and some of its allied races, which was published in the *Dansk ornithologisk Forenings Tidsskrift* (Vol. III., June, 1908, pp. 109-149). This contains a very complete summary of Mr. Schiöler's views on the plumage passage of the Eider, as well as notes on skeletons, breeding-habits, and the distribution of allied races.

In the following descriptions of the plumages of the Common Eider, I have taken specimens whose plumage is normal at the days mentioned. Sometimes there is a

* Broadly speaking this is quite correct, although many males do not attain full plumage until December, owing to the delay in moulting.

delay or advance of several months, according to the condition or early hatching of the bird. All birds described are, for the sake of explanation, supposed to have been hatched on July 1st.

MALE.

DOWN-PLUMAGE.—*Crown, cheeks, wings, back, and rump* brown with long hair-like down of brownish-grey on *shoulders* and *wings* (over the whole of the *back* there is an olive-green tinge which soon vanishes), darker towards the *rump* and *tail*; *eye-stripe, chin, breast, and belly* grey, grey-yellow, or very pale brown; *neck* brownish-grey; *thighs* brown. *Bill* blue-grey; *nail* bone-yellow; *feet* blue-grey; *irides* brown. Length at four days, 9 inches.

JUVENILE-PLUMAGE.—At four weeks, feathers appear on the shoulders, and the legs and feet become lead-blue and grow to a large size. The irides too become more red-brown. By August 12th the young are three-parts grown, and by September 1st they are clothed in their first plumage and are able to fly. It is generally stated that the young at first resemble the adult female, but this is hardly the case on close examination.

Head and *neck* grey with dark brown centres to the feathers; *eye-stripe* light grey with dark brown centres; *nape, shoulders, scapulars* blackish-brown with narrow sandy edges; *rump* brown-black; *upper tail-coverts* black edged with reddish-brown; centre of the *wing* blackish-brown edged with sandy-brown; *primaries* brown; *secondaries* grey-brown edged with pale sandy-brown; *throat* grey; *chest* and *lower-parts* blackish-brown with sandy edges to the feathers (in some examples the *lower-belly* and *vent* are a uniform grey-brown, whilst others are almost black with the feathers edged with sandy-brown); *thighs* reddish-brown and barred with black-brown. *Feet* and *toes* lead-grey; *bill* green above, running into blue-grey below and in front of the nostrils.

FIRST WINTER-PLUMAGE. — There is little change until the middle of October* when a very general moult commences through the plumage except on the mantle, wings, lower-breast and belly, and rump—these portions

* Sometimes a few white feathers come into the scapulars as early as September.

of the plumage not being renewed as a rule until the chief moult in July. On examining a large series of young males between October and July of the first year, the most remarkable variation is noticeable in the time of shedding the tail-feathers. In some examples the worn juvenile-feathers are moulted in October and a new black set is obtained by the 19th of that month, whilst in others they are being renewed in April, and yet in others in July after the birds have passed into their first eclipse-plumage.

Between October and February the quantity of new plumage acquired by young males by fresh moult is extremely variable, some being as far advanced at the end of October as others by the end of February.

First stage.—The average young male in November has the *crown* and sides of the *head* rich red-brown; *eye-stripe* from sandy-yellow to russet-brown; over the eye a black-brown patch of feathers; *cheeks* and *sides of the neck* almost black; *nape*, *neck-collar*, and *upper tail-coverts* black; *back* and *inner scapulars* black and white or brown and white intermixed; *chin*, front of the *neck*, *lores*, and *cheeks* pale grey-brown, showing small blackish markings; *upper-chest* white with black edgings or brown bars; sides of the *upper-chest* and feathers on *flanks* that cover the wings black. The *wings*, *mantle*, *rump*, and *lower-parts* usually retain the juvenile-plumage, but fade considerably as the season advances. Many examples, however, assume a large number of black feathers, from the lower portion of the white-and-cream *chest-shield* to the *rump*.

So the advance continues—new feathers coming in and old ones “wearing” and moulting—to April, when the young male seems to have effected all the plumage-change he will do until the eclipse-plumage commences.

Second Stage.—By the middle of April many advanced young males have the whole of the *chin*, *chest*, and *nape* white and cream-buff as in old birds; the *crown* and sides of the back of the *head* remain reddish-brown, the black patches above, below, and in front of the eye to the bill are generally half-changed*; the sea-green patch over and

* The change when it takes place on the crown, as it does in a few advanced birds, is effected by a wearing process. The red-brown tips wear off and the proximal parts of the feathers, which are black with a blue gloss, are revealed.

behind the *ear-coverts* is also completely developed or inter-mixed with black-and-brown feathers of the first stage; the *cheeks* too are usually mixed dark brown and white; a line of black feathers is now fully developed along the *upper flanks*; *upper* and *lower tail-coverts* are renewed and black; *scapulars* are white with broad or narrow edges of black. As previously stated the *crown*, *mantle*, *rump*, and *wings* and nearly all the *lower-parts* remain in juvenile-plumage, and the feathers of these parts are not shed until August. The change of the *tail* also varies in individuals. The most interesting feature of the plumage of the nine-months-old male in April, is that when gaining the white *chin* and *throat* it nearly always leaves a broad V-shaped line of the brown feathers. This characteristic mark is often retained throughout the summer, and forms an interesting parallel to the V-shaped mark found in many of the adult males of *S. m. mollissima* and its allied races.

FIRST ECLIPSE-PLUMAGE.—From April until the end of June little or no change takes place except the usual fading and wearing of the feathers, and then the first eclipse-plumage begins to make its appearance and may be said to be complete by the end of July.

The feathers of the whole *head* and *neck* are shed and replaced in a few days by a plumage resembling, but somewhat darker than, that of the juvenile; *eye-stripe* dull white with blackish markings; *crown*, upper-parts of *cheeks*, and back of *head* and *neck* black; rest of *cheeks* and *throat* grey-brown; *mantle* and *scapulars* blackish-brown. In a bird killed on July 6th at Fitfulhead, Shetland, which has effected the above change, the *wings*, *tail*, and nearly all the *lower-parts* are still in juvenile-plumage, much worn and faded; the white-and-buff shield on the *upper-chest* and its sides is replaced by a new set of feathers—white with brown-black bars and edged with reddish-brown; the long faded *scapulars* are still unshed and sandy-yellow as well as the *primaries*.

SECOND WINTER-PLUMAGE.—So the plumage remains until the middle of August when the wings and tail are generally renewed, though this is sometimes not accomplished until early September. Towards the end of August the next change to second winter-plumage commences and all the lower-parts and flanks are changed

to black for the first time,* and a general moult takes place throughout the whole plumage. The moult proceeds somewhat slowly and is not as a rule complete until the end of November, whilst a few late birds even retain an occasional feather or so of the eclipse until February. The general character of the second winter-plumage is similar to that of adult males, except that the former can always be distinguished by the black edges to the long curled sickle-feathers of the inner secondaries. Moreover these feathers are never so large or so well curled as in adults. This character is invariable as well as the "mottled" appearance of the wing. The wing in the second winter-plumage is generally black all round its edges, from the primary-coverts to the shoulders, whilst the lesser, median, and secondary coverts have the feathers broadly or narrowly edged with black, these portions in the adult male always being pure white. By April all traces of immaturity have gone except on the wings.

SECOND ECLIPSE-PLUMAGE.—This often begins to appear as early as June 1st, and like the first eclipse the moult commences on the head and neck, the dark colours next coming in by means of a moult over the chest, back, and scapulars, so that all the bright colours may be quickly obliterated. The feathers of the lower-parts, rump, wings, and tail are not shed and remain in second winter-plumage.

The second eclipse is for the most part similar in colouring to the first eclipse, that is to say in the case of the new feathers that have been gained in July, but these second eclipse Eiders can always be distinguished in this month from first eclipse and adult birds by the colourings of the wings and curled secondaries, which remain as in second-winter birds. The whole of the lower-parts also are jet-black as in adult birds. Moreover males in the second eclipse never lose *all* the white

* Instances of a young bird getting its black lower-parts in the first year are somewhat rare, but I have seen examples of this.

feathers on nape, back, and scapulars as adults do, and this plumage has an incomplete appearance.

ADULT WINTER-PLUMAGE.—The breast, lower-parts, long sickle-feathers, wings, rump, under and upper tail-coverts are only shed once—between July 1st and October 1st, by which date the male has half-shed his second eclipse and has taken on half of his first adult winter-plumage. So the first adult winter-plumage continues to advance until it is often quite complete by November 1st. Wherefore the full plumage of the male Eider is obtained in two years and four months. Many however do not attain full plumage until December.

Top of the *head* rich bluish-black divided in the centre of the *crown* which blends in the sea-green colour that covers the back of the *head*, the *nape*, and the *auricular* region; *cheeks*, *back*, and *scapulars* white with the latter tinged with yellow; centre of *back*, *rump*, *upper tail-coverts* deep black; a conspicuous white patch on either side of the *rump*; *tail* brown with a grey suffusion; *primaries* brown; *secondaries*, outer feathers black, middle feather white with broad black margin, inner feathers long and curled and white; *lesser* and *medium wing-coverts* white with a slight tinge of yellow; *chin*, *throat* and *lower-neck* white; *upper-breast* buff; *flanks*, *lower-breast*, *belly*, and *under tail-coverts* deep black. *Bill* olive-green above blending into blue-grey below and in front of the nostril; *nail* bone-yellow, a line of blue-grey along the side of the lower mandible; *feet* and *legs* brown suffused with green, *webs* black; *irides* rich brown. Length 22 to 25 inches. Wing $11\frac{1}{4}$ in., tarsus $1\frac{3}{4}$ in.

ADULT ECLIPSE-PLUMAGE.—In May, the males have lost the full beauty of their plumage: the upper-breast feathers become dull and the bird loses the fine yellow tint on the scapulars and the rich green tint on the head fades, and by June the tail and sickle-feathers are worn and abraded.

Sometimes as early as June 23rd and more generally about July 1st-4th, the eclipse-plumage of the adult male begins to appear on the neck and mantle. Some

birds change the bright parts of the plumage such as the head, neck, upper-breast, back and upper scapulars in a week, the rest of the plumage—which embraces the lower-parts, wings, inner secondaries, tail, and tail-coverts—is only changed once into direct winter-plumage. The bird may be said to be in full eclipse about August 5th when it has a very “black” appearance on the water.

Head and *neck*, except for a small space of grey and black feathers over the eye, black with proximal parts of the feathers brown; *nape*, *mantle*, and *scapulars* black; sometimes the black feathers in the centre of the *back* are finely edged with white, but this wears off in October; *wings* and *tail* as in winter-plumage; *upper-breast* white barred with black and edged with reddish-brown; rest of *under-parts* black as in winter-plumage.

NOTE.—Some examples are not so dark as above described and have the chin and throat suffused with grey, others never completely lose the white feathers on the nape but renew in September directly into white again. I do not feel certain as to what extent the feathers on the upper-breast are changed, and think this region is shed differently according to individuals, some taking on temporary eclipse-feathers and others only renewing once between July 1st and October 1st. I think however the region nearest to the neck is generally renewed twice and that nearest to the lower-breast and belly only once, because we find males in every degree of feathers “wearing” from October 1st to the end of November. The black-edged feathers in October and November are not shed again during these months to pure buff ones, but wear the black edges away.

Briefly, to summarize the plumages of the male Eider, the duckling passes from its down-state to Juvenile-plumage, which it only retains in part, varying greatly in individuals, for a short time. The “speckled” First Winter-plumage is attained through the first winter and early spring. The juvenile-wing, sometimes the tail, and usually the lower-parts are retained for a whole year. At twelve months the greater part of the First Eclipse-plumage is assumed, and this again is soon moulted with the parts of the plumage that only

change once a year. From fifteen to eighteen months the Second Winter-plumage is gained and the bird is like the adult male except for the pied fore-wing and the black-edged curled secondaries. This plumage is kept until twenty-four months when the Second Eclipse is assumed. At twenty-seven months the third winter-moult is in full progress, and the bird attains Adult-plumage with perfect white fore-wing and curled secondaries at 28-30 months.

There is not the least doubt that, as Mr. Schiöler points out, the male bird becomes more brilliant in plumage and more massive in skeleton in the fourth spring, but to all intents and purposes it is adult at 28-30 months and will pair and breed in the following spring. It may be possible that the immature male may pair and breed in its second year, though we have no conclusive proof that it does so, for it is usual to see these immature males in flocks at the pairing time; whilst if they attempt to interfere with the females, they are driven off by the adult males. As I have myself seen, they go through the full "show" of the adult, and are capable of copulation although their testes are very small at this period. Whether the eggs of females paired to these two-year-old males are fertile or not I cannot say.

Even the young males of ten months go through the full courtship show, and make the courting-call similar to the adult though they do not evince much desire to pair with a female. Such however is not always the case. On May 1st, 1912, at Scampston, Mr. St. Quintin had on his river-pond four ten-months-old males, and one adult female which was most anxious for a mate. All the young males were "showing" and calling, and the old female literally hunted the most advanced young male until she got underneath him in the water and forced him to pair. Mr. St. Quintin and I witnessed the act twice. The female laid eggs, but they were not fertile, so we must presume that such abnormal pairing is unusual and ineffective.

FEMALE.

DOWN-PLUMAGE.—Like that of the male but generally darker on the *under-parts* and the *eye-stripe* narrower and shorter.

JUVENILE-PLUMAGE.—*Head* and *neck* brownish-grey with darker centres ; *eye-stripe* light grey with dark brown centres ; *mantle*, *scapulars*, *back*, and *rump* dark brown with light sandy-brown edges ; *tail* brown and worn at the tips ; *upper-wing* above and including the *lesser wing-coverts* blackish-brown edged with rich brown ; *primaries* nearly black ; *secondaries* blackish-brown with a very narrow edge of pale greyish-brown ; *throat* grey ; *breast* and *belly* pale grey-brown crossed with dark greyish-brown bars and edged with sandy grey-brown (the dark bars on the *upper-breast* are much broader and more clearly defined than those on the *belly*, while the *flank-feathers* near the rump are also more heavily barred).

NOTE.—The juvenile female can be distinguished from the juvenile male by its smaller *eye-stripe* and by its paler *upper-parts* and darker *upper-breast*.

FIRST WINTER-PLUMAGE.—As a rule the moult is slower in the case of the female, which does not commence its first winter-moult until early November. Then the first feathers with broad reddish-brown edges appear on the shoulders, lines of a chestnut-brown come in on the head, and new black-barred rich brown ones on the upper-breast and belly. So the advent of a first semi-adult plumage proceeds slowly until March, when the bird has an appearance somewhat similar to the adult female except that the wings, tail, and long secondaries have not been renewed, and on close examination there are still a large number of the feathers of the juvenile-plumage on the breast and belly. The tail is a most variable feature. As a rule it is not renewed until the end of the first year, but in very forward birds one or two (generally those in the centre) new feathers are gained in spring. By May these ten-months-old females have the whole of the breast- and belly-feathers changed and similar to adults. These young birds can however always be distinguished from adult females by the dark

and faded long scapulars and secondaries *and by the absence of white on the secondaries and secondary-coverts.*

In July, these immature females of one year flock together and are again easily recognised by their "black" appearance on the water and their faded wings. In many of them the mantle and scapulars appear to be almost black, for the sandy-coloured edges are nearly worn off prior to moulting.

SECOND WINTER-PLUMAGE.—The moult commences at the end of July, and during August and September the whole plumage undergoes a complete change to that of the second winter. In October these second-year females are very similar to adult females except that *the white band on the lower edge of the secondaries and secondary-coverts is very narrow.* On examining several of these females the plumage seems more heavily barred and not so red-brown as in adult females, nor are the birds themselves so large. Neither do they moult quite so early as adults. On the other hand in spring they lose colour more quickly than adult females, and have a worn and faded appearance as early as June. The black bars on the flanks and breast are very conspicuous and the whole of the head and upper-parts very much darker than in adults. The secondaries and secondary-coverts are worn greyish-brown with the narrow white edge still showing.

The oviduct of these second-year females is larger than that of the five-months females, but is not developed like that of an old bird. Schiöler remarks that the ovary presents a somewhat different appearance, the single eggs being discernible and a few of them being a little enlarged. It may be possible that some of these immature females of twenty-two months breed, yet I think that the majority do not do so, for I have shot several consorting with the small packs of nine-months old females which kept quite apart all the spring and summer from the breeding birds, whilst all Mr. Schiöler's

examinations go to prove that female birds do not breed until the third spring.

ADULT-PLUMAGE.—At the age of two years the bird commences another complete moult similar to that of the year before, and changes directly into its third winter-plumage which is that of the adult female. This is generally finished in November, when the female may be said to be adult at twenty-eight months—in fact maturity is reached at the same time as in the case of the male.

In the following spring she breeds. Females in the fourth year are more brilliant than those in the third year.

The female is in her best plumage in February. *Head* and *neck* sandy-rufous speckled with black; *crown* dark brown with sandy borders; *mantle*, *scapulars*, *upper parts of the wing*, *back*, and *rump* dark brown, the feathers edged with sandy or rufous; *tail* brown; *primaries* nearly black; *secondaries* and *secondary-coverts* brown with paler edges, the outer edges broadly transversed with white and forming two alar bars; the five inner *secondaries* are a rich sandy-rufous; *chin* inclined to grey; *upper-breast*, *flanks*, and *under tail-coverts* dark brown, the feathers edged with sandy or rufous; rest of *under-parts* greyish-brown. *Legs* and *toes* brownish-slate with green suffusion; *bill* like that of the male only paler. Length 24 in., wing 11 in., tarsus 1.75 in.

NOTE.—With age there is an inclination on the part of the long *secondaries* to curl downwards, but not to such an extent as is seen in the male.

NOTES

CROSSBILLS BREEDING IN SUFFOLK FOR THE FOURTH YEAR IN SUCCESSION.

It is gratifying to see Mr. C. S. Meares's note on the Crossbill (*Loxia c. curvirostra*) breeding in Shropshire and Norfolk (*British Birds*, Vol. VI., p. 371), and to find that it has also bred in Surrey (*Countryside*, Vol. V., p. 387). There can be no doubt as to the authenticity of the latter record, as the time, position and materials of the nest are quite typical. The above records, in conjunction with my experience given below, further strengthens my contention that the Crossbill must now be ranked as a resident breeding species in England.

On January 20th, 1913, I received information of Crossbills having been seen in three separate parts of Suffolk, all apparently paired, one flock of sixteen, one of eight, and one of four. On March 15th young birds were seen. I accordingly paid a visit to the district on March 16th, and though I spent two whole days in search of the birds I did not see or hear one; but I found in two widely separated parts plenty of evidence of Crossbills in the form of very recently worked pine-cones. Just after my visit I received information of a nest with four eggs. Unfortunately I was unable to go and inspect the nest *in situ*, but both nest and eggs were forwarded to me for inspection, which left no doubt as to the authenticity, both being quite typical. This nest was situated in a Scotch pine, nine feet only from the ground and on the side of a high road. When the nest was visited a second time the bird was on and refused to leave the tree.

In conversation with a keeper whom I had not previously met, I was informed that Crossbills were seen every autumn during the game-driving; he knew the birds quite well.

P. F. BUNYARD.

[With reference to the *Countryside* record quoted above, it should be stated that the birds were apparently not seen, and that the eggs are merely described as being very much like those of a Greenfinch. Apparently no comparison of either nest or eggs was made.—H.F.W.]

CROSSBILLS BREEDING IN SHROPSHIRE.

WITH reference to the Crossbill's nest at Grinshill, described by Mr. C. S. Meares in Vol. VI., p. 371, I may add that I subsequently paid two visits to the locality. On the first occasion, although I saw no Crossbills at the nest, I heard two males singing. One of them was very excited, and presently he came flying overhead and alighted in a tall fir tree in full view; he was joined almost immediately by a hen bird, and they were evidently about to pair when something alarmed them and both flew off into the wood out of sight. This pair was evidently about to nest, and as there was another male singing, and the nest found by Mr. Meares, it is probable that at least two, if not three pairs, nested in this wood at Grinshill. H. E. FORREST.

FIRECRESTS IN KENT.

IN 1906, I recorded in the *Zoologist* the appearance of a pair of Firecrests (*Regulus i. ignicapillus*) at Tunbridge Wells, where they remained at one spot from March 3rd (or earlier) till April 2nd. For several years afterwards I looked for them in the same place during the winter, but latterly I had not looked very specially, although I think they would hardly have escaped my observation if they had been present any winter or spring. On December 20th, 1912, I found a pair at exactly the same spot, and they were to be seen there until January 10th, 1913. On January 17th I could not see them, and after that time they were not seen again, although Miss Turner looked for them once or twice in late January and February, and I spent some hours there in early March on several days. It seems clear that they cannot have stayed as late as the birds seen in 1906.

I am not prepared to give an opinion on the possibility of these birds being the same as in 1906. As a rule, I believe those birds which migrate to their winter-quarters singly or in pairs, return to the same place annually to a greater extent than those which are more gregarious in winter. But as far as I have been able to judge from a good deal of observation in this district, the conditions of a particular year have some influence on the amount of migration undertaken; so that it seems to me not inconceivable that a pair of Firecrests might winter further east or west for six years and then come again to a place which they had visited seven years before. On the other hand, if they were the same birds, I am surprised that they did not stay till approximately

the same time. Indeed, I find it almost equally difficult to believe either that they were or that they were not the same birds.

H. G. ALEXANDER.

WOOD-WARBLE IN NORTHERN SUTHERLAND.

The Hand-List of British Birds gives the Wood-Warbler (*Phylloscopus s. sibilatrix*) as very rare north of south-east Sutherland and west of Lairg, so that it may be of interest to record that one was frequently heard singing in June this year, 1913, in a birch-wood by the side of Loch Hope, which is in the extreme north of Sutherland and decidedly west of Lairg.

G. BROOKSBANK.

CURIOUS SITE FOR NEST OF NIGHTINGALE.

I WAS shown a few days ago, in the garden of a neighbour, the nest from which a brood of young Nightingales (*Luscinia m. megarhyncha*) had just flown. It was placed under the eaves of a shed, about five feet nine inches from the ground, partly in a hole in the wall and partly in the jasmine which grew up it. I had previously repeatedly seen and heard the Nightingales in the garden, and had talked to the gardener about them, asking him to let me know if he found the nest. Unfortunately my friend, the owner, was away for a fortnight or so when the nest was found, and the birds often seen feeding the young in the nest. During his absence I did not visit the garden, nor did the gardener think to come and tell me that he had found the nest. My friend returned home the day after the young left the nest, and told me about it. The gardener and a maid, who had seen the old birds feeding the young, and watched them leading the young away from the nest, pointed out the birds they had seen, which were Nightingales. The gardener is a sensible man, who knows the common birds of the neighbourhood well. The nest was a large structure of moss, hair, etc., and large numbers of oak leaves.

WALTER B. NICHOLS.

CUCKOOS AND THE STRUGGLE FOR BREEDING-TERRITORY.

THE struggle for existence in bird-life as expressed in the acquisition of breeding-territory, has been a subject that has interested me for many years, and the significance of this first step towards reproduction is well established. Recently I have had opportunities of observing the behaviour of the Cuckoo (*Cuculus c. canorus*) from this point of view, and find that the law of breeding-territory plays an important part

in its sexual life also. Apart from the general question of fitness which this struggle implies—fitness not only physical but psychical, as expressed in the disposition to secure as well as to defend—we can see in many cases that this territorial instinct is beneficial: in the smaller species for instance, where an adequate supply of food is ensured for the helpless offspring, or in cliff-breeding species where without a small ledge or position on a ledge, reproduction would be impossible. But in the case of a bird with such peculiar instincts as the Cuckoo, it is not easy to indicate the precise direction in which an advantage lies. It seems to me, however, that it may be of use indirectly as a means of preventing the risk of the female depositing more than one egg in the same nest. Why she does not do so, why she does not repeat a profitable piece of experience, has always been a mystery to me; for it must be manifest to anyone who studies the behaviour of the lower animals, how strong a tendency exists towards repetition. Some piece of behaviour, trifling perhaps in itself, is repeated day after day under similar circumstances. Observe the daily routine of any bird—notice the manner in which the same tree, the same twig in fact, is made use of for a certain purpose, the same spot resorted to for food or for the collecting of nesting-material, the same lines of flight taken—and it will be apparent how important a rôle association plays in the psychology of birds. Now, the Cuckoo finds, with how much effort we cannot say, a nest wherein to deposit her egg. Having passed through this profitable and pleasurable piece of experience, is it unreasonable to suppose that, if she remained in the same locality and were again called upon to deal with her egg, the experience of the previous occasion would be chosen for repetition. I do not think so, judging from the behaviour of other species. How then is this risk averted? The females are said by competent observers to be polyandrous, and my own experience tends to confirm this view; the males are in excess and the females—are nomads wandering from territory to territory, though perhaps only within a certain radius. I have indeed been much impressed with the fact that the males, though collecting round the first female that arrives, and following her temporarily beyond the confines of their territories, yet seem loth later to desert their territories even though she passes through and is clearly in sight. So that in the combination of these two facts, that is to say polyandry and the law of breeding-territory, we have, I believe, an efficient safeguard; for if there were no law of territory a number of males would follow

and collect round a single female, and there would be no inducement for her to extend her wanderings beyond a comparatively small area of ground; and if on the other hand monogamy prevailed, her sphere of influence would again be limited since, according to the law which obtains amongst other species, she would confine herself strictly to the territory of her mate, a forty odd acres or so of land. If anyone can supply me with information bearing directly upon this aspect of Cuckoo-behaviour, or upon the question of breeding-territory generally in any direction in animal-life, I shall be grateful.

H. ELIOT HOWARD.

[Mr. Howard's suggestion that the female Cuckoos are "nomads wandering from territory to territory, though perhaps only within a certain radius," does not seem to derive support from the series of facts recorded by Dr. Rey. Unfortunately he does not appear to have published details with regard to the extent of range of each female, or how far their territories overlap. It is, however, clear from a study of his catalogue that complete series of eggs from several hens can be obtained from a very limited district. According to these tables as many as three or four hens may lay in one district, but it does not follow that their boundaries overlap, and the fact that it is unusual to find more than one Cuckoo's egg in a nest tends to prove the contrary, while instances of three Cuckoos depositing eggs in the same nest are extremely rare.

As an example of Dr. Rey's work we may extract the following: District III. comprised only 28 hectares, yet in 1891 series of 8 and 7 eggs from two different hens were obtained within these limits, and in no case did the two hens make use of the same foster-parents.—F. C. R. JOURDAIN.]

LITTLE OWL BREEDING IN ESSEX.

WHILE staying at Finchingfield in Essex on June 25th, 1913, I saw a pair of Little Owls (*Athene n. noctua*) and one young one. The old birds fed the young one, which was sitting on some iron railings and appeared to be full grown. It flew easily when disturbed.

CECILY J. GURNEY.

[The Little Owl was first recorded as breeding in Essex by Mr. J. H. Owen, in Volume VI., p. 63, but it had been observed in the county even as far back as 1903.—EDS.]

FERRUGINOUS DUCK IN KENT.

ON May 21st, 1913, Miss Turner and I had a good opportunity of watching a Ferruginous Duck (*Nyroca nyroca*) on a "fleet"

in Romney Marsh. It was a drake, not quite in full breeding-plumage. It appears from *The Birds of Kent* that there are only one or two previous records for Kent.

H. G. ALEXANDER.

INCUBATION-PERIOD OF THE COMMON SANDPIPER.

ON May 27th, 1913, at 7 p.m., on the north side of Morecambe Bay, I found a nest of a Common Sandpiper (*Tringa hypoleuca*) containing four eggs, on which the bird was sitting closely. The nest was visited on and off until June 17th, this being the last night when the nest contained eggs, the bird on every occasion sitting very close and allowing approach to within two to three feet. At 7 p.m., on June 18th, the nest was empty save for a few minute pieces of eggshell, and the parent birds—which up to this time had not been heard—were anxiously calling and running about. It was not until June 21st, however, that the young were discovered.

Not counting May 27th—although the nest quite probably contained the full clutch of eggs the day before—and including June 17th, on which night the eggs were still in the nest, the incubation-period in this case was at the least twenty-one days, and may even have been twenty-three days.

As some works give “about fourteen days” as the period, is not the present case unusual?

H. B. TURNEY.

[Mr. W. Evans (*Ibis*, 1891, p. 81) states that an egg in an incubator hatched on the twenty-second day, which agrees with the above observation. Naumann, however, gives two weeks as the period.—EDS.]

GULL-BILLED TERNS IN SUSSEX.

SEVERAL specimens of the Gull-billed Tern (*Sterna n. nilotica*) were reported to me whilst staying at Pett, Sussex, as having been seen along the coast, being “mobbed” by Lesser Terns. I was not fortunate enough to see any on the wing, as they seemed to keep more to the eastward. However, it was not long before they were discovered, with the result that a male was shot on June 18th, 1913, a female on the 21st, and another male on the 23rd. I only saw one in the flesh, but the other two were seen by Mr. Ruskin Butterfield, and there is no question about their being of the same species. All three were obtained near Winchelsea, and as far as I can ascertain none have been seen since in the locality.

H. W. FORD-LINDSAY.

COMMON TERNS BREEDING IN ESSEX.

A SMALL colony of Common Terns (*Sterna hirundo*) has, this year, settled on some saltings in north-east Essex. On June 5th, 1913, in company with Mr. Jones and his son, the owners of the shooting rights over the land, I inspected the colony. We found sixteen nests, and reckoned that about twenty pairs were nesting in the area, with about the same number of Black-headed Gulls. The nests were scattered over a considerable area, but we found at one place three Terns' nests and a Redshank's within a radius of five yards. At the date of our visit we found only one chick hatched.

Mr. Jones has done his utmost to preserve the birds from molestation.

Mr. Miller Christy informs me that he has no record of Common Terns breeding in the county for many years.

WALTER B. NICHOLS.

MOORHEN'S DOUBLE NEST BUILT INTO ONE.

ALTHOUGH there are a good many records of Moorhens (*Gallinula ch. chloropus*) building up their nests after the eggs have been laid, the following rather curious circumstance is, we think, worth relating. On May 4th, 1913, we found at the Mull of Galloway a Moorhen's nest of normal shape and size, containing six eggs, and touching it (but not actually joined to it) another nest with one egg. This second nest appeared to be unfinished, and was only some two or three inches high. The nests were placed on the muddy bank of a small burn, under some trees. We did not visit the nests again until May 7th, and meanwhile, on May 6th, there had been much rain and the burn was overflowing its banks at a good many points. On May 7th we found that the small unfinished nest had been built up on to the normal nest. The new nest-cup thus made only contained four eggs, but on investigation we found that two eggs were lying in the mud near the nest, and two others were buried in the middle of the nest itself, just where its original "cup" was situated. On May 4th there were seven eggs altogether (six in the normal and one in the unfinished nest), so that the bird had been able by some means to bring three of these on to the new "storey," though four had been lost in the process. The nest was certainly in danger of being flooded, but it was not actually touched by the water.

J. G. GORDON.

H. F. WITHERBY.

COOTS AND MOORHENS LAYING IN THE
SAME NEST.

As I do not remember to have seen any record of a Coot (*Fulica a. atra*) and a Moorhen (*Gallinula ch. chloropus*) or two Coots laying in the same nest, the following observations may prove of interest: On May 8th, 1909, I found a nest containing five Coot's eggs and one Moorhen's egg, and on April 13th, 1913, I found one with seven Coot's eggs and one Moorhen's egg; both these nests could only be reached by wading, and had certainly not been interfered with. In the former case the Coot's eggs were all of one type, but in the second, one was quite different from the others; also this egg was fresh, whilst the other Coot's and the Moorhen's eggs were well incubated, showing that a second Coot had laid an egg some time after the first Coot and the Moorhen had laid. A third instance is of two Coots laying together; this nest, containing one egg, I found on April 5th, 1912, and by April 14th it contained eleven eggs; the short period of time that had elapsed suggested that these were the produce of two birds, and this was proved by the fact that there were two distinctly different types of eggs in the nest.

These three instances, occurring on two pools within half a mile of each other, suggest that it is not infrequent for Coots and Moorhens to lay indiscriminately in nests of the former species.

A. GEOFFREY LEIGH.

[Although it is well known among field-ornithologists that Coots and Moorhens, like ducks and game-birds, will lay in each other's nests, standard works seem to omit mention of the fact.—EDS.]

HAWFINCH IN SUTHERLAND.—Mr. F. G. Gunnis reports (*Scot. Nat.*, 1913, p. 160) that a male *Coccothraustes c. coccothraustes* was caught in a garden at Brora on May 8th, 1913. As there is no evidence of breeding we must regard this as a straggler.

MEALY REDPOLLS IN WIGTOWNSHIRE.—Mr. J. G. Gordon states (*Scot. Nat.*, 1913, p. 115) that he saw three Mealy Redpolls (*Carduelis linaria* ? subsp.) on December 2nd, 1912, at Corsemalzie. The bird is rare in the west.

SYKES'S WAGTAIL IN SCOTLAND.—Mr. W. Eagle Clarke announces (*Scot. Nat.*, 1913, p. 153) that an adult male Blue-headed Wagtail which he obtained in Fair Isle on May 18th, 1910, proves to be a specimen of *Motacilla f. beema*. On first obtaining it Mr. Clarke had thought it was nothing

more than a pale example of the typical form, but on re-examination of his Fair Isle collections he finds it to be a specimen of this very pale-headed eastern form which has occurred only once before in the British Isles, viz. in Sussex in April, 1898.

GREY-HEADED WAGTAIL AT THE ISLE OF MAY.—The Misses Rintoul and Baxter record (*Scot. Nat.*, 1913, p. 160) the occurrence of a female *Motacilla f. thunbergi* (regularly observed on migration at Fair Isle and very seldom elsewhere) on the Isle of May on May 16th, 1913.

WHITE WAGTAILS IN SOUTH-EAST IRELAND.—Professor C. J. Patten notes (*Irish Nat.*, 1913, p. 124) that out of twenty-one Wagtails obtained at the Tuskar Rock in the autumns of 1911 and 1912 and spring of 1912, fifteen were *Motacilla a. alba* and only six *M. a. lugubris*. This shows that the White Wagtail passes through in considerable numbers, but the proportions are probably accidental, as I observed in the autumn of 1911 at Rosslare (on the mainland opposite the Tuskar) very large numbers of Pied Wagtails migrating and only a few White.—H.F.W.

CONTINENTAL REDBREAST AND SONG-THRUSH IN HADDINGTONSHIRE.—Mr. W. Evans records (*Scot. Nat.*, 1913, p. 141) the occurrence of a specimen of *Dendralus r. rubecula* at Skateraw and a specimen of *Turdus ph. philomelus* at Barnsness on October 26th, 1912. There are as yet few records of these races from the mainland of Scotland (*cf.* Vol. V., p. 319).

HOOPOE IN FIFESHIRE.—Mr. D. J. Balfour Kirke records (*Scot. Nat.*, 1913, p. 116) that a male *Upupa e. epops* was shot near Kirkcaldy on September 25th, 1912.

CUCKOO REARED IN STARLING'S NEST.—Mr. Harold J. Selby writes in the *Field*, June 14th, 1913, that on June 1st he found two fully-fledged Starlings (*Sturnus v. vulgaris*) and a young Cuckoo (*Cuculus c. canorus*) in a nest in the thatched roof of a deserted farm-building on Cleeve Hill, Gloucestershire. All three birds fluttered out of the nest under the thatch when Mr. Selby put his hand into the nest. The Starling is included in Mr. E. Bidwell's later list of foster-parents and also in Dr. E. Rey's list, but no particulars are given in either case. Probably both refer to a Continental record, as I am not aware that any previous instance is known of the Starling being adopted as a foster-parent in the British Isles. It is unusual, though not unprecedented, for the young of the foster-parent to be reared as well as the young Cuckoo.—F.C.R.J.

ICELAND FALCON IN THE OUTER HEBRIDES.—Mr. W. L. MacGillivray records (*Scot. Nat.*, 1913, p. 141) that a disabled Iceland Falcon (*Falco r. islandicus*) was seen on Barra on March 31st, 1913, and was picked up dead the next day. Mr. MacGillivray is wrong in stating that this is the first record for the Outer Hebrides, as several have been previously obtained.

GREENLAND FALCONS IN IRELAND AND SCOTLAND.—Mr. R. Warren records (*Zool.*, 1913, p. 155) that a specimen of *Falco r. candicans* was shot on Bartragh Island, co. Mayo, on March 2nd, 1913, and that another was seen (*t.c.*, p. 231) at the same place on May 4th. Mr. S. Armstrong records (*Field*, 19.IV.13, p. 772) the shooting of another at Dungiven, co. Derry, on April 13th.

Mr. W. Eagle Clarke states (*Scot. Nat.*, 1913, p. 116) that an adult male obtained at Unst, Shetland, on March 15th, 1913, and an adult female caught on Colonsay on March 31st, have recently been received by the Royal Scottish Museum. Mr. W. L. MacGillivray also records (*t.c.*, p. 141) that he saw a Greenland Falcon on February 21st and another on March 24th at Barra (Outer Hebrides).

HONEY-BUZZARD IN SHETLAND.—An adult specimen of *Pernis a. apivorus* was seen at Lerwick, Unst, on May 25th, 1913, and brought to Dr. J. Edmonston Saxby on the 28th (*Scot. Nat.*, 1913, p. 161).

INCREASE OF FULMAR PETREL IN CAITHNESS.—Dr. J. A. Harvie-Brown announces (*Scot. Nat.*, 1913, p. 141) that he hears from Mr. Lewis Dunbar that the Fulmars breeding on Berriedale Head (first observed there by Mr. A. H. Meiklejohn, *vide antea*, Vol. V., p. 56) “have now occupied the whole range of the Berriedale Rocks.” In the next number of our contemporary (p. 164) Dr. Harvie-Brown states that two Fulmars were shot at or near Pennan Head, Aberdeenshire, in May, 1913.

GULL-BILLED TERN IN ORKNEY.—Mr. J. Bain records (*Scot. Nat.*, 1913, p. 154) that a male *Sterna n. nilotica*, which is a very rare vagrant to England and has not before occurred in Scotland, was picked up exhausted in the Lighthouse garden at the Pentland Skerries on May 7th, 1913.

GREAT SKUA IN WIGTOWNSHIRE.—Mr. J. G. Gordon records (*Scot. Nat.*, 1913, p. 115) that he saw a single *Stercorarius s. skua* on November 1st, 1912, in Luce Bay, and he believes this to be the first record for the county.

LETTERS.

TUFTED DUCK BREEDING IN ESSEX AND THE PRESENCE
OF NON-BREEDING BIRDS.*To the Editors of BRITISH BIRDS.*

SIRS,—Mr. Glegg's note in your current number (Vol. VII., p. 56) concerning the nest of this species which he found beside one of the reservoirs at Walthamstow on June 11th, hardly does full justice to the extraordinary wealth of bird-life to be seen at times on this huge assembly of reservoirs, of which there are twelve altogether, covering an aggregate area of about 480 acres.

On May 23rd, I visited the reservoirs in the company of Mr. J. Mackworth Wood, the Chief Engineer of the Northern District of the Metropolitan Water Board (to which the reservoirs belong), and Mr. Edward Bidwell, when we were astonished at the number of Tufted Ducks we saw. Although we did not visit all the reservoirs, we estimated that we saw at least one thousand birds—all, apparently, in pairs and mostly in groups of ten or twenty pairs. We did not expect to find any of them nesting, as the date was too early: we concluded that the majority would shortly pass on and breed elsewhere, for the banks of the reservoirs are not of a nature to afford suitable nesting-sites for a tenth part of all those we saw. No doubt a large proportion of the birds did pass on, but it is clear, from what Mr. Glegg says, that many remained right on into the breeding-season. That a few do actually breed is evident from Mr. Glegg's statement; and Mr. Wood informs me that, since our visit, he has seen several broods of Tufted Ducks on the reservoirs. That so many should remain without breeding is certainly perplexing; but the number we saw which were obviously paired suggests that sterility can hardly be the reason of their not breeding.

In addition to the foregoing, we saw several Mallard with broods of young, but far fewer than one might have expected.

We saw also at least a dozen pairs of Great Crested Grebes, but none seemed to be nesting, probably because the weeds round the islands and banks were not sufficiently grown to provide shelter. These birds have, however, bred on the reservoirs for some years past. On June 20th, 1909, I saw a bird sitting on its nest; and Mr. Wood informs me that, since our visit on May 23rd last, he has seen several pairs breeding.

On one of the small steep-sided islands, I found a Moorhen's nest containing eggs, built seven or eight feet from the ground in a dense bush—the situation having been chosen, perhaps, to obtain protection for the sitting bird against the depredations of otters, which abound.

Mr. Wood informed us that, a few weeks before our visit, the amount of wild-fowl on the reservoirs had been enormously greater than what we saw. It had included then many Mallard, Teal, and Wigeon, with some Golden-eye.

That water-fowl in such numbers should frequent sheets of water actually within five miles of St. Paul's Cathedral, almost surrounded by a dense population, and with trains and tramcars roaring along the banks of some of them, is certainly very remarkable. It should be remembered, however, that the reservoirs themselves are fenced and very strictly watched, so that no one can actually visit them without special permission.

Similarly, large numbers of wild-fowl may often be seen during winter on the two large reservoirs (having a total area of about 42 acres) between Finsbury Park and Stamford Hill, as both Mr. Bidwell and I can testify. These reservoirs are over a mile nearer the City than the Walthamstow reservoirs: that is to say, they are within four miles of St. Paul's. As to what species remain there to breed, I am less well informed, but Mr. Wood tells me the Great Crested Grebe nested on the weeds last year, and a friend assures me that at least one pair is again breeding there this year; also that several broods of young wild-ducks (species not stated) are now to be seen there.

CHELMSFORD, *July 19th*, 1913.

MILLER CHRISTY.

To the Editors of BRITISH BIRDS.

SIRS,—I can in some degree confirm Mr. Glegg's observation in your July issue as to the numbers of apparently sterile Tufted Ducks. Through the winter these birds are plentiful at a mere near Alderley Edge, Cheshire, though at times they disappear altogether. This year they dwindled from forty on March 29th to fifteen or twenty in the first week of May, but on May 27th there were still about the same number present, and many of these were apparently paired. Some of these birds may have departed to breed elsewhere, but on June 20th there were four pairs. On July 2nd there were two broods, and on July 21st five broods, hatched out. The mother of one brood of eleven continually drove off another female which attempted to approach her offspring. It occurred to me that the latter might be a sterile female, anxious, *more feminarum*, to share the duties of motherhood.

ALDERLEY EDGE, *July 24th*, 1913.

E. W. HENDY.

SMALL CLUTCHES OF EGGS.

To the Editors of BRITISH BIRDS.

SIRS,—My experience this season is entirely at variance with that of Mr. Loyd (*supra*, p. 63). I have this season found the clutches of eggs of our commoner birds quite up to the average, and indeed in the cases of Blackbirds, Thrushes, and Tree-Sparrows above the average, for in the cases of the latter I have four sets of six eggs each in the nesting-boxes where last year I had none, and in the former out of over fifty nests there was a majority of sets of five, where usually we had only four.

BURNAGE, DIDSbury, *July 12th*, 1913.

HERBERT MASSEY.

To the Editors of BRITISH BIRDS.

SIRS,—In reference to Mr. Lewis R. W. Loyd's communication in your last issue as to small clutches of eggs, I see he makes no mention of the Gull Bunting, which is—or was, a few years ago—a common bird at Beer, south Devon. He also mentions the Lesser Whitethroat. I have always understood that in south Devon this bird was practically unknown, or at any rate only a passing bird. Perhaps Mr. Loyd will furnish more particulars as to the occurrence of this species in south Devon. I have identified eggs from north Devon and saw an adult bird in August a few years ago, near Morthoe, but it is rare. Since D'Urban and Mathews's *Birds of Devon* was published, this bird has probably extended its range westward. It is an interesting fact if it is so.

CHESTER, *July 18th*, 1913.

S. G. CUMMINGS.



EIDER DUCK APPROACHING ITS NEST.
(*Copyright by Maud D. Haviland.*)

BRITISH BIRDS

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ON THE BREEDING-SEASON AND CLUTCH OF THE STEGANOPODES.

(CORMORANT, SHAG, AND GANNET.)

BY

THE REV. F. C. R. JOURDAIN.

ONLY three members of this Order figure on the British List, and some of the facts concerning their reproductive habits are sufficiently interesting to deserve a fuller treatment than they have received up to the present in the standard books on the habits and nidification of British birds.* For the sake of convenience each species will be treated separately.

THE CORMORANT, *Phalacrocorax carbo carbo* (L.).

The Cormorant is tolerably generally distributed round the coasts of the British Isles except where the shores are too flat to provide suitable breeding-places. It is a more adaptable species than the Shag, and some of its nesting-places are at considerable distances from the sea. Thus the well-known Bird Rock ("Craig-y-deryn") near Towyn in Merioneth is quite four miles from the sea; in Wigtownshire there is a large colony on Castle Loch, and in Ireland there are breeding-colonies on islands in fresh-water lakes at considerable distances inland, the nests being situated sometimes on the ground and at other times in trees. There is not a great deal of variation in the breeding-season of this species. Probably the earliest British nesters are those on the south coast of Ireland. Mr. R. J. Ussher (*Birds of Ireland*, p. 153) states that in co. Waterford he found several nests with from one to three eggs on April 4th, 1896. This was, however, an exceptionally early date, for in the *Zoologist*, for 1890, p. 436, the same writer gives April 15th and 16th as the earliest dates and also states (*t.c.*, 1886, p. 93) that most of the eggs are laid about the

* For example, in Yarrell (ed. IV., Vol. IV., p. 152) it is merely stated with regard to the Shag that the eggs "are laid from May to June"!

beginning of May. In the north-west of Ireland the season is but little later, and out of fourteen nests with eggs examined by the writer on April 24th, in co. Mayo, two were hard-set and had been incubated about a fortnight. On exposed sites they naturally breed rather later, and it is probable that more than one brood is sometimes reared in a season, for Mr. Ussher has met with eggs at various dates up to July 23rd, and has found young birds on the breeding-ledges as late as August.

On the English and Welsh coasts the first eggs are generally to be found early in May or during the last week of April, but fresh eggs may be met with through May and June and unfledged young have been seen on the Northumbrian coast as late as July. Mr. A. O. Walker's observations (quoted by Dr. W. H. Dobie) show that in North Wales two broods are reared in the season on the Little Orme. Professor J. H. Salter saw newly hatched young on the coast of Cardigan Bay on May 13th, so that full clutches must have been laid here by mid-April (*Zoologist*, 1895, p. 253).

In Scotland the breeding-season is slightly later. Saxby says that in Unst the first eggs are laid towards the middle of May, and Mr. Allan Briggs (*Ann. Scott. Nat. Hist.*, 1893, p. 72) states that on a skerry off North Ronaldshay some fifty nests still contained fresh and hard-set eggs on July 4th. In this colony only four nests contained more than three eggs, but the Rev. J. R. Hale informs me that the average clutch was four, and some nests contained five eggs, in the colony on Mull Head, Pomona, on June 3rd. At Vardö, Schrader states that the usual clutch consists of two eggs only, which may be found at the beginning of June.

In Germany the first eggs may be found from April 10th to 19th, as a rule, but exceptionally eggs have been taken on the Continent as early as the end of March. Seebohm, who visited the lower Danube late in the year, found fresh eggs on June 5th, and inferred that the Cormorants were able to alter the date of breeding according to

circumstances, and did not nest till the snows of the Alps and Carpathians had melted and flooded the country round the breeding-place. However, when I visited the same district at the beginning of April, 1910, hundreds of birds were sitting on eggs, which varied in number from one or two to six, and by April 29th many young were already hatched. Where the nests had been robbed by the peasants fresh eggs were still obtainable nearly a month later, and probably some birds would still be breeding in June. On the whole it is evident that the breeding-season of the Cormorant is very regular, varying normally from the end of March and early April in southern Europe to the latter part of April and early May in England and Ireland, and slightly later in Scotland, while in the Shetlands it breeds from mid-May onwards. Although Dixon and others describe it as single-brooded, there seems no doubt that in some localities at any rate two broods are reared. The number of eggs in the clutch varies considerably. In some northern districts three is the normal clutch, and a set of four is exceptional, but both Mr. Ussher and I have frequently met with sets of five in Ireland, where four is the usual number, and they have also been recorded from the English, Welsh, and Scotch coasts on many occasions. Mr. H. E. Forrest (*Fauna of N. Wales*, p. 250) states that six have been recorded; Mr. G. Bolam (*Birds of Northumberland*, etc., p. 311) mentions two clutches of six each and several of five on the Megstone in 1908; I have seen a clutch of six taken from the Yorkshire coast, and found one in Roumania in 1910, all of which were remarkably small, and undoubtedly laid by the same bird.

THE SHAG, *Phalacrocorax graculus graculus* (L.).

The Shag is strictly marine in its habits, unlike the Cormorant, and though it far outnumbers the Cormorant in the north and west of the British Isles, is absent from the south-east and eastern coasts of England as a breeding species. No inland breeding-places exist. As a nesting

species it is much more irregular in its breeding-season than its ally, but as a rule begins to breed earlier. Mr. R. J. Ussher (*Birds of Ireland*, p. 154) says that he has seen an egg on April 6th, a clutch of three on the 8th, and a slightly incubated set on the 15th. On Lambay the first egg is recorded on April 11th, 1906 (*Irish Nat.*, 1907, p. 27). Mr. Walpole-Bond also found full clutches, some incubated fully a fortnight, off the Mayo coast on April 20th. Fresh eggs may, however, be found throughout May and even in June, and on the Saltees, Mr. Ussher found young as early as May 14th (*Zoologist*, 1890, p. 436)*. In the Channel Islands the breeding-season is still earlier, and eggs have been found on Sark between March 22nd and the end of the month (*Zoologist*, 1898, p. 274 ; 1903, p. 192), but in North Wales they apparently breed twice : the eggs of the first brood being laid in May and those of the second being still unhatched in mid-July (*Fauna of N. Wales*, p. 252). This discrepancy of dates is curious, but when we come to Scotland the difference is still more remarkable : in Wigtownshire, Messrs. J. G. Gordon and H. F. Witherby noticed young about a week old on May 1st, and were told that the female was sitting on March 30th, 1913. In south-east Scotland Mr. H. Raeburn found nests with one to three eggs on March 29th, 1903 (*Zoologist*, 1903, p. 153). Mr. J. B. Dobbie, writing in the *Annals of Scott. Nat. Hist.*, 1898, p. 71, says that on the coast of West Ross breeding does not become general till the end of June, but it seems probable that his observations refer to the second broods. On Skye the late Rev. H. A. Macpherson found fresh eggs as well as fledged young at the beginning of July. In the Orkneys the breeding-season not only begins extremely early in the year, but also lasts till very late. In 1907 the first eggs were actually found on February 24th ! (H. W. Robinson, *The Field*, October 26th, 1907 ; *Zoologist*, 1907, p. 431) and young were seen still in the nest in

* Not May 11th, as stated in the *Zoologist*, 1886, p. 91.

mid-September (J. G. Jeffreys, *Field*, November 2nd, 1907). Mr. J. Tomison considers mid-April as the usual date for the first eggs, but once took an egg on April 5th, 1896 (*Ann. Scott. Nat. Hist.*, 1904, p. 19).

In the Shetlands, Saxby gives early May as the time for the first eggs on Unst, but instances of much earlier breeding are on record. Thus Mr. H. Raeburn (*Zoologist*, 1895, p. 348) found some nests with young birds fully a week old on May 6th, so that the first eggs must have been laid by the end of March. It is a most extraordinary fact that while in the case of the Cormorant the earliest breeding-dates are from the south of Ireland, the Shag on the other hand has been found nesting nearly a month earlier in the Orkneys than the earliest date in the Channel Isles, while the earliest Irish date is a week or so later still.

At first sight it would seem that the fact of a bird's breeding-season extending from February to September was sufficient proof that more than one brood is reared during the season. On the other hand, it is well known that most of the earlier nests are washed away by heavy seas. Thus Mr. J. Tomison (*Ann. Scott. Nat. Hist.*, 1904, p. 18) states that whenever a few fine days occur in February in the Orkneys, the Shags begin nest-building at once, but that these early nests are washed away during the first spell of rough weather. On June 2nd, 1902, a very heavy sea washed away fully two hundred nests, many of them containing young, which were, however, too young to battle with the waves. During the following week nest-building operations were re-commenced, and most of the birds were again sitting by the end of June. These late-layings were hatched in July and August, and the young were able to accompany their parents in September, but it is obvious that in this case the birds could not strictly be called double-brooded.

When we come to consider the number of eggs in the clutch, we find the same curious discrepancies. In the Shetlands the normal clutch consists of three, and four

are quite exceptional (only one being noted out of many hundreds of nests, according to Mr. H. Raeburn); yet Saxby states that they often lay as many as five eggs. In the Orkneys the Rev. J. R. Hale describes three as the usual clutch, but noticed a few nests with four. In Ireland, Mr. Ussher gives three as the usual number, but adds that four are not uncommon, and Mr. H. Massey has two sets of six in his collection from co. Kerry. In the *Annals of Scott. Nat. Hist.*, 1904, p. 19, Mr. J. Tomison states that in a colony of over fifty nests, the eggs varied in number from two to five, but three was the commonest clutch. Professor Collett, who was a reliable and careful observer, states that in Norway the clutch ranges to five or six, and that in one case eight eggs were found in one nest, though probably this was due to two females laying together. The Mediterranean race of the Shag (*P. graculus desmarestii*) is also an early breeder, laying in February and having full-grown young by the end of April. Only on one occasion did I find the young still in the nest early in May, and these were probably a second laying. The usual clutch in the western Mediterranean varies from two to three, frequently two only.

On comparing the records of the two species given above, it will be seen that while the breeding-season of the Cormorant remains almost constant or is subject only to slight variation, that of the Shag is extremely variable and does not appear to depend upon latitude, as the earliest dates from the Orkneys are not widely different from those in the Mediterranean, while on the other hand those for the Irish and Welsh coasts are much later. The average number of eggs laid by the Shag is less than that of the Cormorant, three being most usual in the former species and four in the latter, but both occasionally lay up to six eggs.

THE GANNET, *Sula bassana* (L.).

Owing to the abnormally long incubation-period of this species, which lasts for almost exactly six weeks,

and the slow development of the young, only a single brood is reared during the season, though, of course, a second egg may be laid if the first is taken or destroyed. The clutch invariably consists of one egg,* which is laid as a rule from about the beginning of May, though some birds do not lay till the middle of the month. Mr. Oswin Lee, when visiting the Bass Rock on June 8th, found only two young hatched out. This would make the earliest date for eggs about April 26th, but occasionally they are found much earlier, as the late E. T. Booth saw a young bird already hatched on May 10th, 1867. In this case the egg must have been laid at the end of March, quite a month earlier than usual (*Rough Notes*, Vol. III.).

The breeding-places are not abandoned until September, and in some cases are still occupied in early October. Thus in the *Annals of Scott. Nat. Hist.*, 1908, p. 198, it is stated that young in down were still in the nests on the Bass on October 8th, 1907; and Mr. W. Eagle Clarke mentions that the breeding-ledges at St. Kilda were still occupied on October 8th and 12th (*Studies in Bird Migration*, II., p. 233), but E. T. Booth was unable to discover a single nestling on the Bass on October 7th, 1874.

In the Faeröes, Muller states that eggs may be found from April 14th onward, and that the young are never fledged before September 8th, but exceptionally the old birds may be seen on the cliffs till October 14th. In the colonies on the south-west of Iceland, the eggs are laid in May and young may be met with from early July onwards, while at Grimsey the eggs are rarely seen before the end of May or early June, and Hantzsch could see no young in the nests on July 10th. Here the young are frequently not fully fledged till the end of September, though in the south of Iceland they may be seen from the end of August onwards.

* E. T. Booth states that he has once or twice in a season seen two eggs in a nest, but ascribes it to two pairs using the same nest, or the eggs having been moved by visitors (*Rough Notes*, Vol. III.).

NOTES ON THE BREEDING-HABITS OF THE COMMON EIDER

AS OBSERVED IN THE OUTER HEBRIDES.

By MARY G. S. BEST and MAUD D. HAVILAND.

(PLATE 3.)

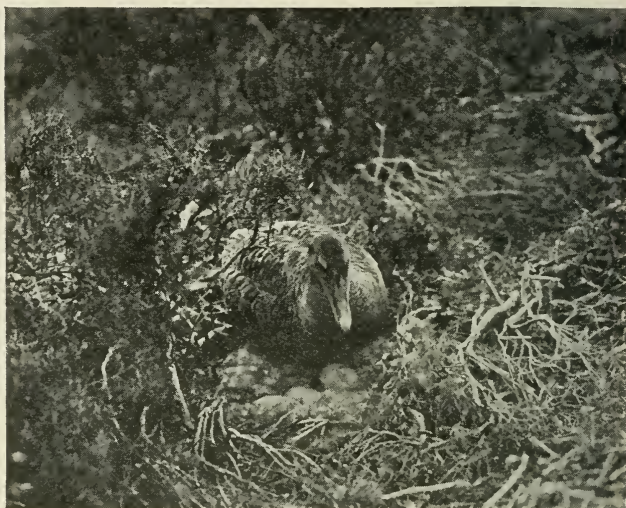
DURING this summer (1913) we found a good many pairs of Eiders (*Somateria m. mollissima*) nesting in the northern portion of a certain large fresh-water loch in the Outer Hebrides. The birds were, however, very shy at the nest, and even with a long-focus lens it was impossible to photograph them without a hiding-shelter. In this respect they differed markedly from the Eiders on the Farnes and elsewhere, whose tameness in the breeding-season is so well known.

The accompanying photographs were taken with an eight-inch Zeiss lens, from a hiding-tent set up seven feet from a nest containing five partly-incubated eggs. From what we could learn, five seems to be the maximum clutch in this district. The duck returned to the island on which the nest was situated as soon as Miss Haviland's companions had left in the boat, but it was nearly one and a half hours before she ventured on to her eggs. The intervening time she spent crouched behind the heather-tuft shown on the left of the photographs. Each time that an exposure was made she started violently, and at the sixth she left the nest again.

A fortnight later Miss Best visited the same place and found two nests built within a few feet of one another. One contained incubated eggs and a plentiful supply of down, the other had an incomplete clutch, and Miss Best put up her tent by the former. After a time she heard a loud persistent quacking beside the tent, and looking out, saw the drake standing there. Meanwhile the duck, which answered him from the other side of the tent, gradually plucked up courage to approach the nest. First of all she sat upon the incomplete clutch of eggs in the nest furthest from the tent, but

the drake continued to call until she came nearer and eventually settled down upon the nest nearest the tent. The drake then went back to the water.

The keeper who was observing the birds through his glasses at some distance, said that the drake arrived on the island accompanied by two ducks—the second presumably being the owner of the nest of unincubated



EIDER DUCK COVERING HER EGGS.

(Copyright by Maud D. Haviland.)

eggs—and that all three birds walked round the tent together. On another occasion I saw a drake Eider standing beside a nest on which the duck was incubating, from which it would appear that the male bird took some interest in domestic concerns, at any rate in the earlier stages; but for the most part, although he loitered in the vicinity of the island with his male companions, he was not to be seen actually on the nest. Once or twice, while bird-nesting on the extensive moors in the neighbourhood, we found isolated pairs of Eiders

breeding on the banks of little tarns and bog-holes. The black-and-white plumage of the drake, as he stood sentry for his incubating mate in the heather, was very conspicuous, and he was never seen far away from the nest.

Off the sea-island of Eilean Mor, one of us had an opportunity of watching the courtship of the Eider.



EIDER DUCK BROODING.

(Copyright by Maud D. Haviland).

The behaviour of the drake resembled that of the Red-breasted Merganser under similar circumstances: this display consisting in a peculiar bobbing or jerking movement of the head as he swam round the duck; but the distance was too great to learn whether any call accompanied the actions.

Mr. Robinson (*supra*, p. 20) states that in Orkney in winter, female Eiders predominate in numbers over males, but in the Outer Hebrides throughout May and

June we found the opposite to be the case, even after making due allowance for the females which were at the nest. We based our calculations, not so much on what we saw on the inland lochs, where many of the drakes may have belonged to breeding pairs, but by what we saw along the western coast of the island. The ground here is under cultivation, and we found no evidence of Eiders breeding on this coast, yet both in May, before the majority of the ducks had begun to sit, and later, we saw many parties of from two to five drakes, and occasionally some consisting of two ducks and three or four drakes, but only twice saw couples of unmated ducks, and these were on inland waters.

ON INCUBATION.

BY

ERIC B. DUNLOP.

As has previously been shown,* many birds belonging to various Orders commence incubation upon the laying of the first egg. This habit is undoubtedly of the utmost value to many species, saving the eggs from destruction by the numerous animals which devour them with avidity : in fact it does not seem too much to say in the case of some, that if the eggs were left exposed, such would be the attacks made upon them, that extinction would shortly result.

If further investigation be made, however, the fact is revealed that the habit is not an unmixed blessing, but brings in its train a great mortality amongst the young of various ovitegous birds of widely different Orders. That the mortality referred to should be directly attributable to a habit which is essentially protective, is a very remarkable fact, but one which can, I think, be clearly proved.

Few people as they pass beneath a rookery would imagine that a tragedy occurred in practically every nest built by these birds : on the contrary the sight and sound of Rooks at home during the nesting-period calls to our minds all that is commonplace and normal. To associate the homely Rook with the tragic, seems to be impossible : nevertheless, according to my observations, the seemingly impossible must be admitted to the realm of fact. As is well known, the Rook very frequently deposits five eggs and occasionally six. It would appear, on the face of it, that the parents should not unusually bring five young birds up to the age at which they are ready to leave the nest. In point of fact, that is rarely or never accomplished. The Rook does not usually rear more than three young, and frequently does not attain even to that moderate degree of success.

* See Vol. V., pp. 322-27, and Vol. IV., pp. 137-45.

The following observations upon the nesting of this species, will illustrate a state of affairs which I have noticed in many instances :—

I.—There were five eggs in the nest on April 4th, on the 5th there were two newly hatched chicks and three eggs. The same condition of affairs existed on the 6th. On the 7th there were three young and two eggs. These eggs did not hatch. All went well until April 11th, when the youngest bird, hatched on the 7th, was found to be dead.

II.—On April 11th there were three eggs in the nest. On the 12th there were two eggs and one young bird. On the 13th two young and one egg. No change on the 14th. On the 15th the last egg had hatched. On April 21st the smallest young one was dead.

III.—On April 15th this nest held five eggs. On the 16th one egg had hatched. On the 17th there were two young and three eggs. On the 18th three young and two eggs; 19th, four young, one egg; 20th, ditto; 21st, five young. The nest was not examined again until April 24th, when the two smallest chicks were dead; one of them had disappeared, the other was lying under the three survivors. On the 26th the smallest of these three was lying dead under the two larger birds.

IV.—On April 5th this nest held one young bird. On the 6th three young; on the 7th four young. On April 19th there were only three young left; the smallest bird having disappeared.

It is seen from these examples, which are (according to my experience) typical of the state of affairs prevalent in the nesting-economy of the Rook, and which were observed under normal circumstances, that the young which emerged from the last laid eggs were the individuals which perished. This is undoubtedly brought about by the great variation in the size of the nestlings, consequent on the difference in age. The first chick hatched of a clutch of five eggs has gained greatly in bulk by the time the nestling from the last egg laid has emerged; the natural result of this is that when the parent comes with a supply of food for the sustenance of its offspring, the oldest bird is the one whose head is upstretched to meet the proffered morsel in the most prominent manner, and this chick has the greatest strength with which to press for food; even where the parent bird is desirous of apportioning the food in an equable manner (and this desire is evidently not strong in many species), it can be no easy matter to ensure the youngest bird its fair share of supplies,

there being without doubt a tendency for the oldest and strongest to obtain more than its due.

The condition of affairs prevailing in the case of the oldest and youngest nestlings, is found only in a lesser degree among the other members of the brood—the older chicks demanding with vigour more than their share of food, and the younger having neither the strength to demand their portion with equal insistence and vigour, nor the bulk to bring themselves into notice when the parent bird is distributing the supplies. Evidently the result of this is that the seniors tend to grow at a greater pace than the juniors, and the disparity in size becomes still more emphasized. Gradually the younger members of the brood are starved, and the larger nestlings, with their greater bulk and strength, tread the smaller under foot, until these unfortunates give up the unequal struggle and perish, doomed, as they were, from the hour when they left the shell.

A somewhat similar state of affairs prevails in the case of some of the Falconidæ.

The Buzzard is a case in point, the younger members of a family frequently disappearing. The following extracts are illustrative of this.

Mr. Arthur Brook, writing in the *Field* of January 20th, 1912, says of this species :—

Should all the eggs be hatched, one of the young birds (always the smallest and youngest) will sometimes disappear. Time and again I have observed this happen. In my opinion the young bird is starved to death by the larger youngsters taking all the food, and when dead is actually devoured by them. I have known this happen in the case of the Sparrow-Hawk. Out of a nest containing six young birds, one—a very young one—disappeared, all except its beak and part of the skull. If it were not eaten how came these fragments to be left in the nest ?

Professor J. H. Salter also writes* of the Buzzard :—

Incubation appears to commence as soon as the first egg is laid. The young are consequently hatched at intervals of one, or perhaps, two days. The nestling which is first hatched is naturally the strongest, and the result is frequently a family tragedy. It appears to be quite

* *Zoologist*, 1904, p. 101.

the usual thing for the first-born to kill one if not both of his younger brothers. I first became aware of this habit ten years ago, while examining a brood of three young Buzzards. One of them, fierce as an Eaglet, struck at my finger, and at a shrew which I held to him, then caught one of his fellow-nestlings by the nape of the neck, and pecked and worried him with all his might. Again, referring to two newly-hatched young, I have a note: "The stronger one bullied the other one unmercifully, and was evidently in process of doing it to death." Mr. Grubb writes of a nest which "had three young when I first saw it, but one was rapidly bullying the others to death. A week later this one—the biggest of the three—had finished his brothers and grown proportionately."

A writer in the *Zoologist* notes a case in which the younger of two Indian Pariah Kites perished. Of the two eggs, the first hatched on February 4th, the second on February 7th:—

On the 21st February I found the younger fledgling dead in the nest. It was quite flattened out, a circumstance indicating that the mother must either have trampled it to death by accident, or sat upon it too heavily. The carcase was intact, but on the fourth day after the occurrence there was nothing left but a few fragments scattered about; the mother, apparently knowing that the bird was dead, had made a meal of it.

It may here be mentioned that John Wolley was told of young Montagu's Harriers pecking one of their fellows to death when it had become smeared with blood.

It seems probable to me that in all these species of the Falconidæ, the smaller young may meet their end by any of the foregoing means: the other young may starve or bully them to death, or may attack them when they have inadvertently become smeared with blood whilst devouring their food; again, the parent-birds may crush the less vigorous to death. But though the means of destruction are varied the root cause is the same: it is the handicap of being hatched out at a later date than the nestlings from the eggs laid first.

In this connexion a factor which is of undoubted importance, is the greater interval which I have frequently noticed between the laying of the last eggs, compared with that elapsing between those deposited earlier. Very commonly in the case of a bird which has laid its eggs with a regular interval between them, the

period will be extended when the last egg comes to be deposited, and this is no doubt caused by the partial exhaustion of the reproductive powers. The result of this is very noticeable in many instances when a nest of young is examined, for the older birds are graduated in size more or less regularly, whilst the youngest of the brood exhibits a great inferiority in bulk to the nestling hatched previously to it. It is quite clear that this must result in the youngest chick being still more severely penalized in its struggle for existence, than if it had been hatched out after an interval similar to that intervening between the other members of the brood.

Additional species in which I have known the youngest members of broods of young birds to disappear, are the Kestrel, the Long-eared Owl, and the Tawny Owl.

Another bird which rears few young compared to the number of eggs it lays, is the Great Crested Grebe. Four or five eggs are very frequently deposited, but it is not usual for more than two young to be brought to maturity. Mr. Edward Tristram suggests, in the *Field* of October 14th, 1911, that as incubation commences as soon as the first egg is laid, when the first one or two chicks are hatched the parents at once leave the nest with them, regardless of the remaining eggs which have not hatched out. This occurred in the case of a pair which he kept under observation.

Some facts connected with another family of birds, the Gruidæ, are worthy of attention with regard to the subject of this paper. Mr. F. E. Blaauw notes of a pair of Japanese Cranes which he had in captivity, that an egg was deposited on May 12th, 1906, when incubation began, a second being laid two days later. The first chick emerged on June 14th, and the other on June 16th. Again, of the Japanese Cranes at Lilford Hall, it has been recorded* that the first egg is laid two days in advance of the second, and the male begins to incubate

* *Avicultural Magazine*, Third Series, Vol. II., p. 147.

the first egg at once, so that it hatches two days before the other. When one day old the first young one leaves the nest, and is immediately taken charge of by the male, who finds all food and broods it most carefully. When the second is strong enough to leave the nest the mother takes charge of it.

Also of the Siberian Crane it is stated that two eggs are laid, and, as is the case with the former species, the male incubates until the laying of the second egg.

Bearing this evidence of the birds being ovitegous in mind, the following quotation from Blyth's *Monograph of the Cranes* is of considerable interest:—

As a rule two eggs are produced, but Mr. Hume remarks of the Siberian Crane (as observed by him in its winter quarters) that "they never appear to have more than one young one with them; but it does not at all follow," he adds, "that they do not lay more than one egg. Our commonest Indian Crane (*G. antigone*) which usually lays two, and sometimes, though rarely, three eggs, and which has no long and arduous journey to perform, seldom succeeds in rearing more than a single young one." He further adds that, of more than a hundred pairs of Siberian Cranes which he had observed in their winter quarters, he had not seen any accompanied by more than a single offspring.

Mr. F. M. Chapman, in his *Camps and Cruises of an Ornithologist*, places some very interesting information on record, which bears directly upon the subject discussed in this article.

On Cay Verde he found thirty-five nests of Boobies (*Sula leucogaster*) containing eggs. Of these twenty-one held two eggs, while fourteen contained one only, but possibly in some, if not most of these, another egg would have been laid. Two eggs, therefore, was the rule, which confirms previously recorded observations on the nesting-habits of this species. On the other hand, two young were the exception. Of seven hundred and forty nests counted by Dr. Mayer, on the east side of the Cay, only two contained two young, and both pairs were well grown and approximately of the same age. On examining the eggs found in sets of two, it was discovered that either there was a marked difference in the development of the embryos, or that one or both

eggs were infertile. For example, of thirteen nests containing two eggs, in three nests both were bad, in ten both were good, but with every good pair there was about a week's difference in the age of the embryo. In six nests, each containing one young and one egg, five of the eggs were decomposed.

Walter K. Fisher, writing of the Blue-faced Booby (*S. cyanops*) on Laysan, has the following passage:—

We found young and eggs in about equal numbers, and most of the eggs were far advanced in incubation. The young varied from about a week old down to newly hatched individuals. It is a curious fact that although there are two eggs, only one young is reared. Often all signs of the second egg were removed, as if the young had been hatched and had been devoured by a parent or some marauding *Fregata*. But more frequently there would be one nestling and one egg. Sometimes this egg was spoiled, sometimes contained an embryo. In one case I found two newly hatched young, one of which had already been trampled to death. Professor Nutting saw one large nestling and one small, still alive, but I doubt if it lived long. The presence of only one young bird has been noted in the eastern Pacific, at Clipperton Island, by R. H. Beck, and Rothschild mentions the same fact for Laysan. The voracity of the bird first hatched is probably responsible for the death of the second.

The observations recorded concerning the Rook may be taken in order to illustrate the fact that a habit can be evolved which saves a species from extinction or a near approach to it, and yet this very habit destroys approximately one half of the young which are brought into existence.

As has been shown in a previous paper, the habit of incubating from the deposition of the first egg is undoubtedly of inestimable value to this species. It is a matter of everyday observation in spring that Rooks will steal their neighbour's nesting-material at every possible opportunity. No sooner is a nest left unattended than one or two birds also engaged in nidification make haste to appropriate the materials which have been built into the unguarded nest. Kleptomania is one of the Rook's worst failings.

Again, his taste for eggs is very strongly developed, and he gratifies it whenever he has a chance. That the Rook would rob his neighbour's nest of material and not

of eggs is beyond belief ; indeed, I have known a Rook's eggs to disappear one by one, and there appeared to be little doubt that this individual was not a close sitter, and therefore advantage was taken of the fact by the occupants of adjacent nests. It can clearly be seen, therefore, that the habit of incubating from the first egg, is of the greatest possible value to the species, in aiding the birds to rear more than a single young one. But through this very habit the younger birds in every family have no chance of reaching maturity : in the struggle for food and existence which takes place among the young in each nest of the Rook, the birds which emerge from the eggs that are laid last are too heavily handicapped, and after a short and pitiful life they succumb to the force of circumstances.

Taking into consideration the high development of birds, there is surely in the whole animal kingdom no more remarkable state of affairs ! In many forms of life there is a very great mortality during the earlier stages of existence : in the case of many fishes the number of young which perish shortly after their life has begun is appalling, but these instances and others differ fundamentally from that dealt with here, for the young always stand an equal chance in their struggle, whereas, in the case of the birds, the later-hatched young are foredoomed to perish.

Now it is quite evident that with all the birds mentioned in the course of this paper, there is a great waste of substance and energy. To commence with, the hen undergoes the strain of producing the eggs, which are destined to be of no use to the species. If this waste did not take place, it is certain that the young produced from the smaller number of eggs laid would possess increased vigour, for the health and strength of the female parent would be conserved instead of being needlessly expended. Again, the period of incubation would be shortened, and the sitting bird would be sooner

released from this exhausting duty. Consequently it would be in a better condition to tend its young.

When several young are hatched only to perish after some days of hopeless struggle against the inevitable, the parents and remaining young are penalized in their struggle for existence, and in the following manner. The old birds during the earlier period after all the eggs have hatched, have to supply food for, say, five nestlings. This is no light task, and there is necessity for continuous labour from dawn till dark, but at least two of the young fed at the expense of this strenuous parental exertion are invariably, or almost invariably, overwhelmed by the older members of the brood, and do not come to maturity, hence the work involved in feeding them is love's labour lost—the parents have expended their vigour and wasted a considerable amount of food to no purpose. Now, if fewer eggs had been deposited and only the young hatched which would eventually have a reasonable chance of being reared, it would be greatly to the advantage of the individuals involved, for all food brought by the parents would be divided amongst vigorous offspring and these would all receive a larger share than if there were more mouths to be fed, therefore these young would have a much better start in the world than those reared where there were young to be fed unprofitably and to some extent at the expense of the older nestlings. The adults also would benefit, for they would in all probability be relieved to a certain extent in their search for food, and yet would easily provide a larger amount for each individual of the smaller number of young.

This being so, it is clear that a reduction in the number of eggs laid would be of great value in such cases as have been recorded in this article. That such reduction has already taken place in many instances, there can, I think, be little doubt, for the laying of a small number of eggs is evidently an ornithic specialization evolved since the class arose from its reptilian forerunners.

The Sulidæ appear to me to illustrate clearly how this reduction has been brought about in their case. We see that in some species—e.g. *S. leucogaster*, *S. cyanops*—two eggs are the normal clutch. But it is exceptional for more than one young to be reared. Of seven hundred and forty nests only two contained two young. W. K. Fisher found a nest with two newly hatched young chicks, one of which had already been trampled to death. It is then very unusual for the chick which appears last to survive though it may hatch soon after the first. The usual interval between the deposition of the eggs was found to be a week: for such a space of time to elapse before the completion of a clutch of two eggs is abnormal, and it appears highly probable that this is a preliminary to the birds ceasing to deposit the second egg. A large proportion of the second eggs laid was found to be infertile, and this is undoubtedly a sign of decadence.

Now in the case of *S. leucogaster* about ninety-eight per cent. of the birds had young. Thirty-five nests were found containing eggs alone, of these twenty-one held two eggs, and fourteen held only one. Though it was suggested that in some if not most of these latter cases another egg might have been laid, it appears certain, considering how late in the season these observations were made, that a single egg sometimes is all that is deposited by *S. leucogaster*. This shows that the reduction from two eggs to one has actually taken place in some individuals of this species.

In other members of the family no trace remains of the stage when the normal clutch was two eggs. As an instance *S. piscator* may be mentioned, and the Gannet, *S. bassana*, invariably lays a single egg only.

NOTES

“LAND-RAIL” AND “INCREASE AND DECREASE IN SUMMER RESIDENTS” INQUIRIES.

WE have received a good many schedules relating to these two inquiries (see Vol. VI., pp. 296-311, and Vol. VII, pp. 4-6), but we sincerely hope that many more of our readers will send in particulars. This should now be done *without delay*, and if the forms have been lost or mislaid others will be sent at once on receipt of a post-card.—EDS.

VARIATION IN TONGUE-SPOTS OF NESTLING SKYLARK.

WHEN, in 1907 (*cf. Ibis*, 1907, p. 574), I drew attention to the tongue-marks found in the young of certain Passerine birds, I was under the impression that the pattern of these ornamentations was always fixed, and a constant character in the species that possessed them. This, however, is apparently not the case, for on July 29th, 1913, I found the nest of a Skylark (*Alauda a. arvensis*) containing fledglings with abnormally marked tongues. Hitherto all the nestling Skylarks I have examined have had (a) a black mark on the inside of the tips of both mandibles, and (b) three very distinct black spots on the tongue, one situated at the apex and the others laterally on the basal half of the tongue (*cf. op. cit.*, p. 575, fig. 13).

In the three nestlings I found on July 29th these usually conspicuous basal spots on the tongue were wanting in each individual.

COLLINGWOOD INGRAM.

[Dr. C. B. Ticehurst (*B.B.*, Vol. II., p. 194) and Miss A. C. Jackson (*op. cit.*, p. 196) also specify the tongue-spots of the nestling Skylark as three in number and situated as described above as normal.—EDS.]

UNUSUAL SITES FOR PIED WAGTAILS' NESTS.

EARLY in July, 1913, my attention was called to the nest of a Pied Wagtail (*Motacilla alba lugubris*) built upon flat ground on the edge of a border in a kitchen-garden. It then contained three eggs. On July 18th I again visited the spot, and the nest then contained a young Cuckoo about one-third grown, which was being fed by the parent Wagtails. The nest had become so pressed down by the young bird, that it

was absolutely flat and the Cuckoo was sitting close inside a low edging-tile, which alone separated the bird from the gravel-path adjoining.

JOHN R. B. MASEFIELD.

ON June 30th, 1913, I found a Pied Wagtail's nest containing three fresh eggs in a recently ploughed field. A large sod had not fallen into its place and thus made a small "cave," and in this the nest was placed. It was some 30 yards from a fence and about 350 yards from water, though this is not unusual. Later, however, some Rooks found the nest and destroyed it.

J. H. OWEN.

WILLOW-TIT NESTING IN CHESHIRE.

A PAIR of Willow-Tits (*Parus a. kleinschmidtii*) have nested this year (1913) in a covert not far from Bowdon, in Cheshire. I noticed them first on April 15th, when they were paying occasional visits to a hole at the top of a high and partly rotten white willow. They were not working hard at the hole, but spent a considerable time in the undergrowth near the tree, and were frequently within a few feet of me. The dull brown-black cap was easy to see, and the pale edges of the secondaries often conspicuous; but neither on this nor subsequent visits did it strike me that the graduated tail is a good character to see in the field. In general coloration the birds were duller than the Marsh-Tit.

For several days the birds made occasional visits to the hole and brought out chips, but it was not until April 25th that they were hard at work. On that date both birds were bringing out chips as fast as they could. Each time they brought out a chip or chips they flew with them to a tree some yards away before they dropped their load. Mr. Jourdain (*British Bird Book*, III., p. 180) says that "the chips are often left lying below the hole," but in this case every chip was carefully removed. Incubation began on or about May 2nd, for on that and subsequent days only one bird was visible. I could not be sure if the male took any share in incubation, but it was usually the male which was about the neighbouring trees and bushes. He sang frequently; his song, to my ear, was similar to, but softer than, that of the Marsh-Tit—there was more "s" than "z" in it. He also had a note which I have not heard any other tit utter: it sounded like the repeated twang of a stringed instrument, but I am not musician enough to describe it. The birds were apparently feeding the young on May 16th, and both parents were occasionally off the nest at the same time. I failed to see the young leave, and, indeed, am not sure if the brood

was successfully brought off, for on June 7th the two old birds were in the bushes near the nesting-tree unaccompanied by any young. I did not see them again near the tree, but on July 17th I saw a pair of Willow-Tits with two or three young birds, feeding in the alders and reeds in another part of the wood. These may or may not have been the same birds. A pair of Marsh-Tits nested in the same wood this spring. Messrs. A. W. Boyd, T. Hadfield, and C. Oldham, also saw the Willow-Tits.

T. A. COWARD.

ALPINE RING-OUZEL IN SUSSEX.

ON March 29th, 1913, a female Ring-Ouzel was shot at Warren Farm near Brighton, Sussex, and was sent to me as a light-coloured specimen. As I have the male Alpine Ring-Ouzel, killed on May 23rd, 1911, in my collection, I recognized this bird as a female Alpine Ring-Ouzel (*Turdus torquatus alpestris*). Mr. H. F. Witherby has kindly examined it, and confirms my identification.

J. B. NICHOLS.

EASTERN DESERT-WHEATEAR IN KENT.

ON May 21st, 1913, a fine male specimen of the Desert-Wheatear was obtained at Scotney, in Kent. It was shown to me in the flesh on May 22nd. This is the first record for the county, although there have been five previous records for the British Isles—three in Scotland, and two in England.

H. W. FORD-LINDSAY.

[By the kindness of Mr. J. B. Nichols, in whose possession it is, I have examined this specimen carefully in company with Dr. E. Hartert, and find it to be an example of the Eastern Desert-Wheatear (*Enanthe deserti albifrons*). Only one identified specimen of this form of the Desert-Wheatear has previously been recorded for the British Isles.—H.F.W.]

FOOD OF A YOUNG CUCKOO.

ON skinning a young Cuckoo (*Cuculus c. canorus*) recently, which had left the nest, I was greatly surprised to find the stomach full of grains and husks of wheat, some small round seeds like dock, and one small land-snail; but the wheat constituted by far the greater proportion. The Cuckoo was being followed by a Willow-Wren, and it is possible that this was the foster-parent; but it must be remembered that it has been recorded that Cuckoos are sometimes fed by birds other than their real foster-parents.

R. B. LODGE.

LITTLE OWL BREEDING IN WARWICKSHIRE.

The Little Owl (*Athene n. noctua*) is, from the accounts which reach me, on the increase in Warwickshire. One pair has this year (1913) reared four or five young at Baginton, three miles south of Coventry, and four eggs were taken and the hen bird killed on the nest by boys at Bubbenhall. Both nests were in holes in trees previously occupied by Jackdaws.

JAMES R. STARLEY.

[We know of no previous record of the Little Owl *breeding* in Warwickshire.—Eds.]

RUDDY SHELD-DUCK IN CHESHIRE.

ON July 17th, 1913, I noticed a female Ruddy Sheld-Duck (*Casarca ferruginea*) swimming on Rostherne Mere, Cheshire. It remained on the water for over three weeks, and was seen by Mr. A. W. Boyd and Mr. T. Hadfield. As a rule, the bird swam so low in the water forward, that the pale wing-coverts were hidden; but when it flew, as it did on the 19th when we approached it in a boat, the wings showed a large, almost white, patch. It was shy and nervous and would not allow the boat to get near. The natural supposition would be that this bird had escaped from confinement, but the note of "D," in the *Field* for July 19th (p. 177), describing a visit of six birds to Loch Spynie in early July, suggests the *possibility* of a Ruddy Sheld-Duck invasion.

T. A. COWARD.

COMMON SCOTERS IN SUMMER :

IN CHESHIRE AND NORTH WALES.

ON June 19th, 1913, Mr. A. W. Boyd saw five Common Scoters (*Oidemia n. nigra*) on Rostherne Mere, Cheshire; all were black birds, presumably males. On the 20th I could not see these latter, but there were two brown birds with pale cheeks (females or young males) on the same water. On the 22nd, Mr. F. Brownsword, when on the beach at Old Colwyn, noticed, far out in Liverpool Bay, what looked to the naked eye like a line of steamer-smoke, but with the aid of glasses he could see was a long flight of Scoters travelling eastward towards Abergele. He could not estimate the numbers, but guessed that the line was at least a mile in length. Several small parties alighted on the water whilst he was watching the birds.

There were again three Scoters on Rostherne on the 27th: two were males and one a pale-cheeked bird. Mr. Boyd only found one, a brown bird, on July 2nd, but saw four black Scoters on Marbury Mere, near Northwich, on July 5th,

where Mr. J. Moore saw a drake and a brown bird on July 31st. The numbers on Rostherne had risen to seven, all black birds, on July 7th, but Mr. Boyd failed to find any on the 9th; on the 12th, however there was a single male bird on the water. It is, of course, well known that a few immature or non-breeding Scoters remain off our shores in most summers, but the presence of so large a number as was noticed by Mr. Brownsword, and the repeated occurrence of various individuals on inland waters, surely indicates an unusual movement of the species. T. A. COWARD.

IN HERTFORDSHIRE AND BUCKINGHAMSHIRE.

THE visits of Common Scoters to inland waters when on passage in April and again in October are perhaps to be expected, but the occurrence of this species in such situations during July is surely unusual. On July 13th, 1913, there was a brown, grey-cheeked bird, a female or immature male, on one of the reservoirs at Tring, Hertfordshire. This bird was at the same place on July 19th, and on that date I saw another, an adult male, feeding in shallow water at Weston Turville reservoir, Buckinghamshire. In six consecutive dives this bird was below the surface for 29, 27, 28, 25, 26, and 24 seconds, and as the intervals between the dives only averaged five seconds the bird was under water five-sixths of the time. It may be that the duration of the dive is determined by the depth at which food is obtained, for the bird at Tring was feeding in deep water, and nine dives which I timed occupied respectively 40, 37, 45, 32, 51, 49, 44, 49, and 39 seconds. CHAS. OLDHAM.

COLOUR OF THE BEAK IN THE EIDER.

IN his article on the plumages of the Eider (*supra*, p. 75) Mr. J. G. Millais expresses the general view, viz. that the colour of the beak in the adult male Eider is olive-green on its upper surface. In life the base of the beak in the adult male is orange-yellow, and this colour extends as far as the extreme end of the nostrils. It commences to fade soon after death, beginning at the nostrils about half an hour after death, and fading upwards and as a rule in a few days, or even hours, this colour is all gone. There are exceptions to this, however, as witness the bird in the Oldham Museum, which had the base of the beak still yellow when the bird was being set up, and this combined with a V-mark on the throat led Mr. Stubbs to call attention to the specimen as a supposed Pacific Eider.

All the books say that the beak is green, which it certainly

is in skins, but not in life. The bill of the adult female is also never correctly described, and Mr. Milla's again errs in giving it (p. 80) as the same as in the male but paler, viz. olive-green.

The colour of the bill of the adult female shortly after death is pale mauve or bluish-grey from its base to the base of the nostrils, and this colour also very soon disappears.

H. W. ROBINSON.

GREEN SANDPIPER IN PERTHSHIRE.

THE Green Sandpiper (*Tringa ocrophus*) is scarce in northern Scotland, and it is therefore worth recording that I saw one on the north shore of Loch Rannoch, on August 5th, 1913. The date is rather early, but Saunders (*Manual*, p. 609) states that individuals occur even in July.

I examined the bird several times through field-glasses, and was struck by its large size, extremely white underparts, and the absence of the jerky motion of the tail so characteristic of the Common Sandpiper.

CLIFFORD BORRER.

BLACK-TAILED GODWIT IN SUSSEX.

AN example of the Black-tailed Godwit (*Limosa limosa*) was obtained at Pevensey, on July 12th, 1913. I examined it in the flesh on the 13th and found it to be an adult female. Black-tailed Godwits do not as a rule put in an appearance here before August or September, and then only on very rare occasions.

H. W. FORD-LINDSAY.

LITTLE CRAKE IN SUSSEX.

ON July 19th, 1913, a specimen of the Little Crake (*Porzana parva*) was caught by a dog at Bopeep, St. Leonards, and was seen by me in the flesh on the 20th, when it proved to be a female. A second example, a male, was shot in the old brickfield, at St. Leonards, on July 25th. Probably these birds were a pair.

H. W. FORD-LINDSAY.

MOORHEN CARRYING HER YOUNG ON HER BACK.

ON July 5th, 1913, in company with Mr. Bryan, I was passing a large pond near Cheadle, Staffordshire, when a half-grown Moorhen swam out from the bank and was joined by what appeared to be the mother-bird, and the two swam about, ten yards or so from where we stood. The parent-bird dived several times, and some minutes afterwards we observed something rise up on her back, and this turned out to be a still younger bird, only a few days old, and as the pond was

quite free from weeds we should certainly have seen it if it had been swimming about before. Therefore, I think it is clear that this young bird must have been upon its mother's back when she dived and came up again. After this we watched the three birds for some time, and saw the smaller young one jump off and on its mother's back and feed on flies meanwhile. When alarmed the little bird at once took refuge there, crouching down between her wings so as to become invisible, and off she swam with it to a more secure distance. No doubt this is a general habit of this species, as it is of the Grebes, but I have not myself observed it before. The two young birds both appeared to belong to the same mother, but how can the discrepancy in age be accounted for?

JOHN R. B. MASEFIELD.

BIRDS IN NORFOLK IN 1912.—Mr. J. H. Gurney's well-known annual report on the ornithology of Norfolk, contains a number of interesting items for the year 1912 (*Zool.*, 1913, pp. 161-81). Of breeding-records the following are important:—

LITTLE OWL (*Athene n. noctua*).—Mr. N. Tracey was shown four eggs and a photograph of some young ones taken not far from Lynn (p. 162), from which it would seem that Norfolk must now be added to the growing list of counties in which this bird breeds.

BITTERN (*Botaurus s. stellaris*).—We are delighted to read (pp. 170 and 175) that the Bittern was again present in 1912 in the place where it bred in 1911 (*cf. B.B.*, Vol. V., pp. 90-97). Mr. Gurney himself heard it "booming" on April 29th, and carefully describes the note. On August 21st Mr. Robert Gurney approached within an oar's length of an old bird with a "completely fledged young one standing by it."

OYSTERCATCHER (*Hæmatopus o. ostralegus*).—A pair bred at Blakeney (p. 172).

COMMON SANDPIPER (*Tringa hypoleuca*).—On June 27th Mr. Falcon was walking by the Bure at Coltishall when his dog brought out of some herbage, about fifty yards from the river, a nestling in down of the Common Sandpiper. On going to the spot in the afternoon Mr. Gurney and his friends failed to find the young again, but they saw the parent birds, which betrayed great anxiety (p. 173). The Common Sandpiper has only once before (Hickling, 1897) been proved to breed in Norfolk or Suffolk.

COMMON CURLEW (*Numenius a. arquata*).—Mr. N. Tracey again reports the Common Curlew as breeding near Lynn (*cf. antea*, Vol. IV., p. 88, Vol. VI., p. 25).

Of the rarities which occurred in 1912, the following have not been noticed in our pages :—

NUTCRACKER (*Nucifraga caryocatactes* ? subsp.).—One was seen by Mrs. Fowler at Gunton Hall, on October 26th (p. 177).

[GREAT REED-WARBLER (*Acrocephalus arundinaceus*).—A “large Reed-Warbler,” believed to have been of this species, was seen by Mr. E. Campbell Taylor on the Broads on July 21st (p. 175).]

SCOPS-OWL (*Otus s. scops*).—One which was shot at Heacham on June 15th, had been heard calling in the neighbourhood for a month previously (p. 173).

WHITE STORK (*Ciconia c. ciconia*).—One was seen at Hickling on April 26th.

SPOONBILL (*Platalea l. leucorodia*).—As usual these birds were seen at intervals at Breydon in May, June, and July, as well as in the north of the county in May and July and at Southwold (Suffolk) in June (p. 171).

[SNOW-GOOSE (*Anser hyperboreus*).—One seen at Holkham on January 21st and six on the coast on October 31st were possibly “escapes” from Woburn.]

[RUDDY SHELD-DUCK (*Casarca ferruginea*).—Two shot on Breydon on October 5th were most probably escaped birds.]

STONE-CURLEW (*Burhinus æ. ædicnemus*).—One was seen on January 10th at East Ruston (p. 166).

GREAT SKUA (*Stercorarius s. skua*).—One was found dead on the beach near Cromer during hard frost on January 28th.

ALBINO HOUSE-MARTIN.—On July 30th, 1913, whilst in the Alexandra Park, Hastings, I noticed an Albino House-Martin (*Hirundo urbica*) hawking flies over one of the lakes. It was a perfect specimen : there were no signs of a dark feather. On inquiry of one of the gardeners I found it had been observed there for the previous fortnight, and it is still to be seen up to the time of writing (August 14th).

H. W. FORD-LINDSAY.

SQUACCO HERON IN CO. CORK.—A female specimen of *Ardeola r. ralloides* is recorded by Mr. R. Warren (*Zool.*, 1913, p. 276) as having been shot on May 13th, 1913, near Skibbereen. Only nine Squacco Herons have been previously recorded for Ireland, the last in June, 1912 (*cf. supra*, p. 27).

BLACK-THROATED DIVER IN CO. MAYO.—Mr. Robert Warren reports (*Zool.*, 1913, p. 232) that Captain Kirkwood saw a specimen of *Gavia arctica* in full summer-plumage off Bartragh on May 11th, 1913. The bird is rarely seen in the west of Ireland.



REVIEWS

Aberdeen University Bird-migration Inquiry: First Interim Report (1909-12). By A. Landsborough Thomson, M.A., M.B.O.U. (Reprinted from the *Scottish Naturalist*, July, October, November, 1912; February, April and June, 1913.)

THESE papers give details of the "recoveries" or "reappearances" of birds ringed under the auspices of the Aberdeen University. Mr. Thomson prefaces these details with a few remarks on the methods used. The Report contains full details of over three hundred recoveries, some of great interest, and many which will in time, when collated with other records, be of great use. In this connexion we are very glad to see that "no attempt, at this early stage of the work, at drawing conclusions from the facts collected" has been made, and this decision, we think, is a wise one. Among the more interesting cases we may mention the following: A Guillemot ringed in June in Aberdeenshire and recovered in November of the same year near Gothenburg, Sweden; a number of Lapwings ringed in summer in eastern Scotland recovered in the following autumn and winter in Ireland and Portugal; a Woodcock bred in Aberdeenshire and recovered in winter in Asturias, Spain; a Meadow-Pipit caught and ringed in Warwickshire in September and shot in Portugal in December.

We have one criticism to make, which is that it seems a great pity to burden the Report with the publication of a number of quite useless cases. There are nearly 150 records relating to birds which have been recovered at the same place within a few days or a week or two of their having been ringed. Careful note of such records should be kept no doubt, but to publish the details is only wearisome, and, moreover, confusing, in that the really useful records are hidden in a mass of useless ones.

H.F.W.

The Food of some British Wild Birds: A Study in Economic Ornithology. By Walter E. Collinge, M.Sc., F.L.S., F.E.S. London, Dulau. 4s. net.

THIS little book is the result of a number of field-observations, and the examination of the stomach-contents of some 3,500 birds of various species. Mr. Collinge gives a brief account of his methods and the economic importance of birds, some interesting details as to the distribution of weed-seeds by

birds, and a résumé of their relation to forestry, besides a useful bibliography. The main part of the book, however, is devoted to details of his investigations of the food of twenty-nine species. These details are extremely interesting and most valuable, not only from an economic point of view, but also to the ornithologist. We think, however, that many of the author's conclusions as to the economic status of a species are based on quite insufficient data. We hope that Mr. Collinge will continue his investigations and add to our knowledge of the nature of the food of our birds, a subject concerning which he and a few others have done much in recent years to enlighten us.

H.F.W.

LETTER.

TUFTED DUCK BREEDING IN ESSEX.

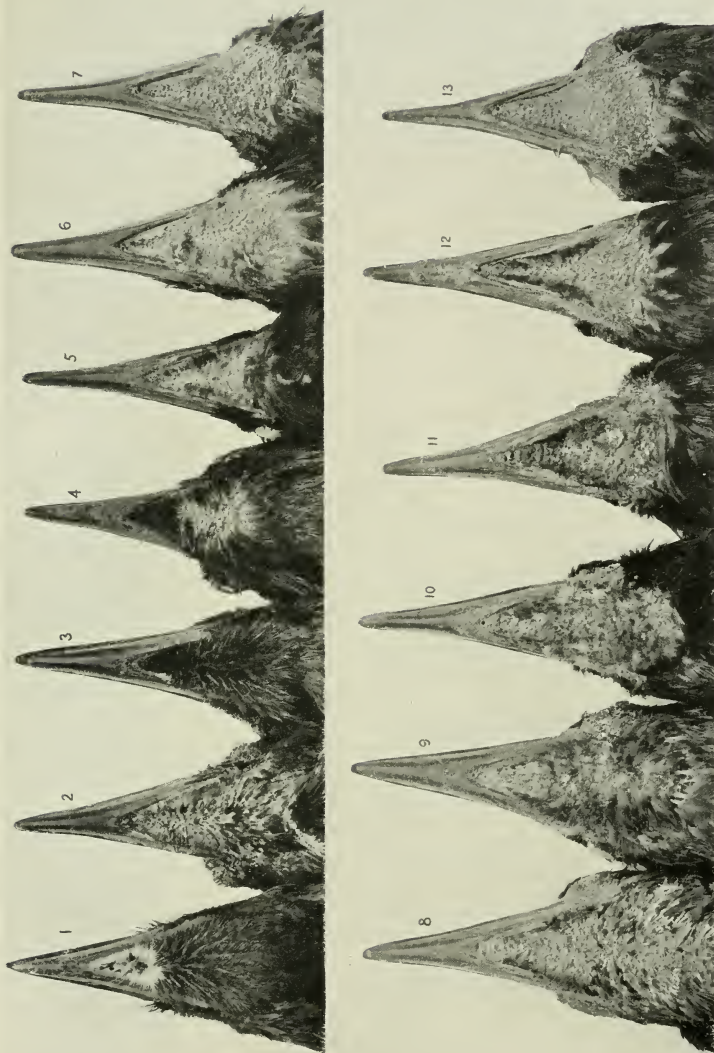
To the Editors of BRITISH BIRDS.

SIRS,—Mr. Miller Christy, in his very interesting letter in your last issue (p. 91), remarks that I have not done justice to the bird-life on Walthamstow Reservoirs, but I must point out that my note was only intended to record the nesting of the Tufted Duck.

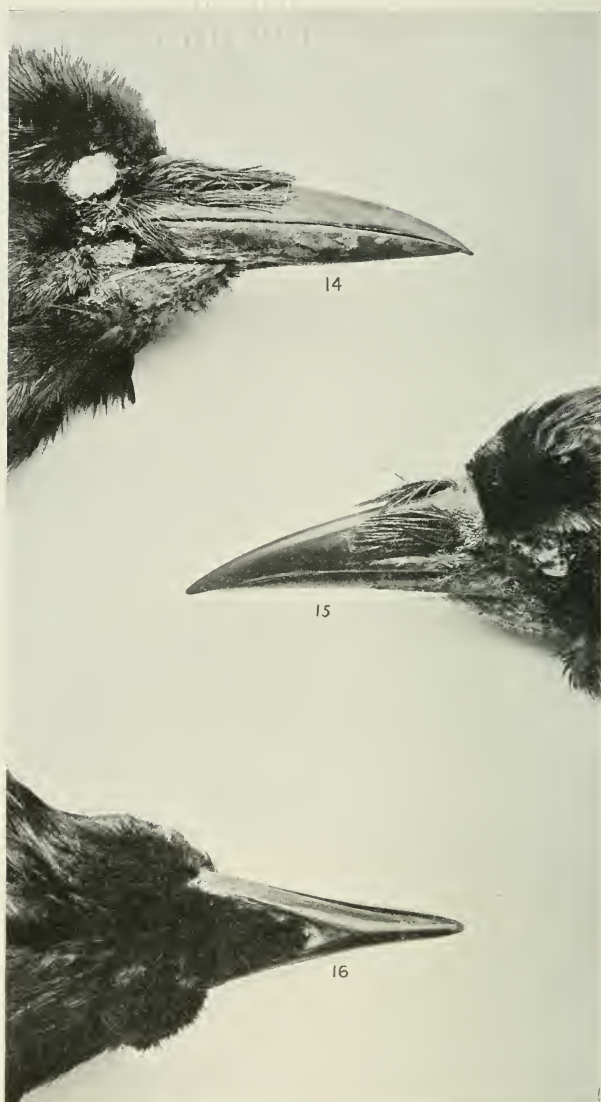
I am surprised Mr. Miller Christy has not mentioned the Pochard as, after the Tufted Duck, this is certainly the most plentiful. On 8th February, 1913, I saw a flock of seventy-six, male and female.

A full list of the many interesting birds which may be seen at these reservoirs is really only of local interest, and I will refrain from occupying more of your space on this matter. WILLIAM E. GLEGG.

STAMFORD HILL, *August 12th*, 1913.



ROOKS' HEADS. Fig. 1, Juvenile. Fig. 2, Juvenile Moulting. Fig. 3, First Winter. Figs. 4-7, Moults of First Summer. Figs. 8-13, Adults. Fig. 8, Autumn moult. Fig. 9, Moult just complete. Figs. 10-13, To show gradual wear of "down."
For explanation see p. 138.



Figs. 14 and 15, Moults of First-summer Rook.

Fig. 16, Adult Eastern Rook.

For explanation see p. 138.

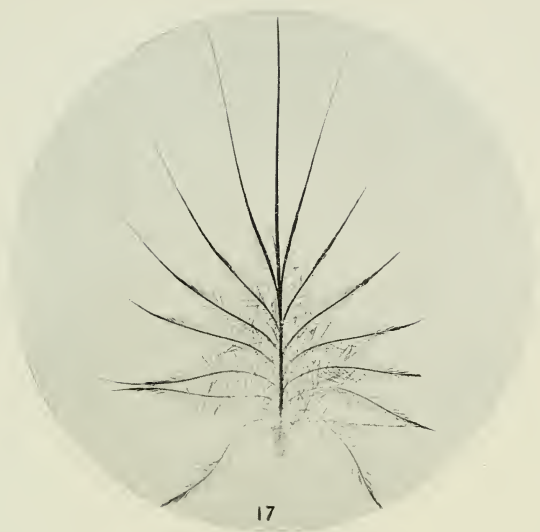


Fig. 17, Feather from Chin of Juvenile Rook.
Fig. 18, Feather from Chin of First-winter Rook. Both $\times 7$ diam.
For explanation see p. 138.

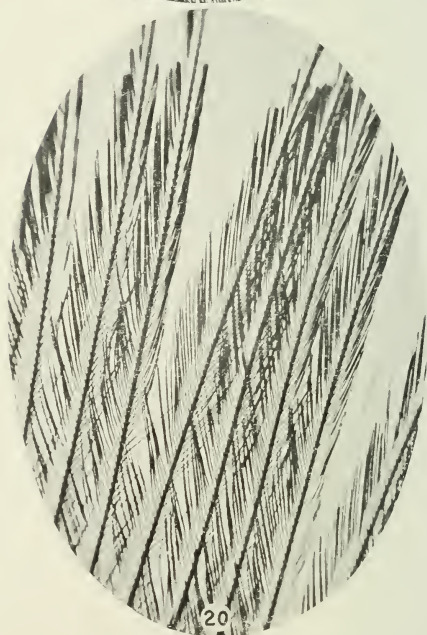


Fig. 19, Portion of Fig. 17 magnified 18 diam.
Fig. 20, Portion of Feather from Throat of First-winter Rook \times 18 diam.
For explanation see p. 139.



21



22

Fig. 21, Plumule from Chin of First-winter Rook $\times 7$ diam.

Fig. 22, Portion of same magnified 18 diam.

For explanation see p. 139.



23



24

Fig. 23, Degenerate Feather from Chin of Adult Rook $\times 7$ diam.

Fig. 24, Portion of same magnified 18 diam.

For explanation see p. 139.

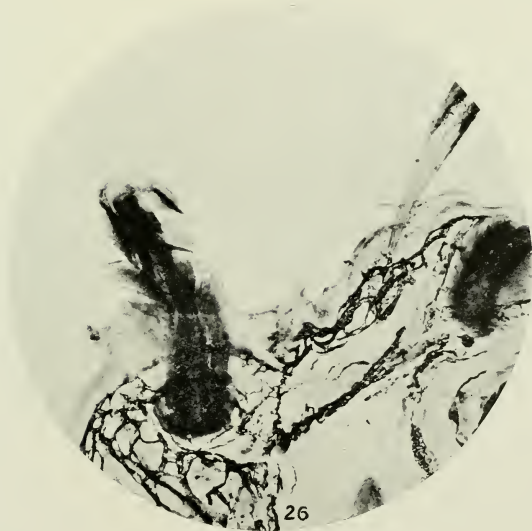


Fig 25, Much worn Degenerate Feather and a Filoplume from Chin of Adult Rook $\times 7$ diam.

Fig. 26, An "Aborted Pin" from Chin of Adult Rook $\times 16$ diam.

For explanation see p. 139.



WING OF ROOK IN MOULT. For explanation see p. 139

BRITISH BIRDS

EDITED BY H. F. WITHERBY, F.Z.S., M.B.O.U.

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THE SEQUENCE OF PLUMAGES OF THE ROOK.

WITH SPECIAL REFERENCE TO THE
MOULT OF THE "FACE."

BY

H. F. WITHERBY.

(PLATES 4-11.)

INTRODUCTORY.

It has always been a disputed point as to whether the Rook (*Corvus f. frugilegus*) gets its bare "face" by means of abrasion of the feathers or by a moult. Most ornithologists have favoured the moult theory or have regarded it as a "natural peculiarity." This conclusion has been reached, however, by inference rather than by actual experiment. A few somewhat trivial experiments have been made with captive birds, but no proper investigation of the subject has hitherto been undertaken so far as I am aware.

Waterton (*Essays on Natural History*, First Series, 1838) appears to have thought that he had solved the problem when the feathers on the face of a young Rook, kept in a cage by a keeper, began to fall out in the middle of August. Unfortunately the bird met with a fatal accident at the end of August, so that although Waterton had good reason for saying "that the feathers fall off from the root of the Rook's bill, by the order of nature," he did not realize that had the bird lived a little longer new feathers would have grown "by the order of nature," and that the bird would have had a fully-feathered face as part of its first winter-plumage.

Knox (*Zoologist*, 1844, pp. 628-33) made a closer investigation, but for want of sufficient care he also came to wrong conclusions. He kept young Rooks in captivity and found that they moulted normally and attained feathered faces in their first winter-plumage. In the spring one of them began to lose its nostril-bristles, but Knox concluded that this was on account of friction

from the bars of the cage, and the bird soon after died. The only one which survived lost none of the feathers on the face, and even after its second winter-moult the face was fully feathered! It is well known that birds in captivity often moult most irregularly, and this is a good instance of the danger of drawing conclusions regarding moult and sequences of plumage from captive birds. Knox, however, continued his investigations by observing wild birds, and found that a small portion of the nostril-bristles was lost in the winter or early spring, but that the plumage of the throat was still nearly perfect. He goes on to say that the rest of the feathers do not disappear until the bird has paired and "the calls of a hungry family urge it to dig from morning till night . . . and induce it to convert the dilatable skin of the throat into a convenient hunting-pouch, the naked scabrous appearance of which can be no mystery to any one who has narrowly observed the habits of the bird at this season of the year." Although he was quite correct in concluding that the "face" becomes bare (though the chin is the first and the nostrils are the last) when the bird is about a year old, the reason he gives for this is mere supposition and he produces no evidence to prove the point.

Blackwall (*Researches in Zoology*, 1873) also kept young Rooks in captivity, but his bird (for only one survived) evidently moulted quite abnormally and did not get a bare face until its second autumn-moult.

Other writers, so far as I have read, have either quoted the above-mentioned experiments, or have theorized on the question, or have ignored it altogether.

With a view to settling the point, I have during the last two years or more made a close investigation of the subject, which has proved full of interest. The material which I have worked upon has consisted entirely of wild birds, and these have been obtained in every month and in nearly every week of the year. For this material I am chiefly indebted to Her Grace the Duchess of

Bedford, who has allowed her keeper, Mr. John Clark, to send me specimens from Bedfordshire; and to Mr. Hugh S. Gladstone, who has similarly permitted his keeper, Mr. Charles Hyslop, to send me Rooks from Dumfriesshire. These two keepers have very kindly supplied specimens of all ages with great regularity, and without such a complete and large series it would have been quite impossible to have solved this somewhat intricate problem. I am also indebted to Mr. Abel Chapman for some specimens sent from time to time. My grateful thanks are also due to Miss A. C. Jackson, who has not only provided me with a number of useful skins and notes, but has most kindly mounted many feathers for microscopical examination.

I have examined eighty-three specimens in the flesh and have kept very careful notes of the condition of the plumage and sexual organs, and have either preserved the whole skin or the head and wing.

PART I.—THE MOULT OF THE “FACE.”

The full sequence of the plumages of the Rook will be given below (see part II.), but I will first describe the process by which the “face” becomes bare.

As is well known, the Rook in its juvenile-plumage has the “face” normally feathered like that of a Carrion-Crow (*Corvus corone*)—that is to say, the nostril-region extending to the base of the skull is covered with bristle-like feathers; similar, but smaller bristles, as well as small contour feathers, grow on the sides of the lower mandibles at their bases, and on the lores, while small feathers are found on the region under the eyes, and feathers clothe the chin and upper-throat—all of which parts become bare in the adult. A closer examination reveals the fact that a number of minute filoplumes or hair-like feathers grow amongst the nostril-bristles, and that larger filoplumes as well as many plumules, or down-like feathers, are concealed amongst the contour feathers of the chin and throat.

In the moult from juvenile- to first winter-plumage, which takes place in July and August, the head moults last, and all the feathers in the regions which afterwards become bare are renewed in a normal manner. The old feathers are cast very rapidly, so that almost all the new feathers in these regions are in sheath together (Plate 4, Fig. 2) and are afforded practically no protection by the old feathers. If damage were done at any time to the feathers by the bird digging in the ground with its bill, as has often been suggested, surely it would be at this stage, when the feathers are just breaking from the sheath, that they would be most prone to injury. Yet when full grown the new feathers are perfect and show no sign whatever of abrasion.

I have examined microscopically feathers taken from the chin twenty-two millimetres from the angle of the lower mandibles* of Rooks in juvenile- and first winter-plumage and can find no essential difference in their structure, though the juvenile-feathers are of a looser texture, their rami and radii being further apart than in the first winter-feathers (Plate 6). But the feathers of this region of the chin and throat which afterwards becomes bare, are even in the first winter of a somewhat degenerate character: the rhachis projects beyond the rest of the feather and is almost bare at its distal end; the distal rami are the same: the rami are far apart, and the radii are also far apart and comparatively long and straggly, not interlocked. The peculiar structure of these feathers, which is markedly different from that of feathers lower down on the throat (Plate 7), may have some significance in relation to the bare patch, but it must be remarked that all other members of the *Corvidæ* which I have examined have feathers of similar structure in this region, even in adult-plumage. Another circumstance which may be significant is that some of the feathers on the chin, generally those nearest the angle of the lower mandibles,

* This being the centre of the region which afterwards becomes bare.

are very frequently white, especially in juvenile but also in first-winter birds.

The Rook remains with its "face" fully feathered until January, and in some individuals until a month or two later. A very gradual moult then commences on the chin, the feathers dropping out generally first in the centre of the part which afterwards becomes bare (Plate 4, Figs. 4-7). The feather papillæ become active and produce "pins," most of which, after growing a millimetre or two (occasionally as much as four or five and exceptionally more) above the skin, then stop growing and remain as "pins" with their tips slightly curled over and shaped like a rounded cone, and without any trace of feather-growth coming from them.* From some of the pins, however, very short degenerate feathers grow. These are in structure almost exactly like plumules, except that they are rather larger. To the naked eye they are down-like: under the microscope they are seen to have a very thin, fine rhachis and long, straggling, fine rami and radii, and are quite unlike the feathers they replace (Plates 8-9). They are dark grey in colour, only some four or five millimetres long, and sometimes show a very slight gloss. Occasionally one finds growing among these "pins" and degenerate feathers, a new feather of normal structure which has somehow escaped the degeneracy of the others.

It is a remarkable fact that most of the filoplumes and plumules remain and are not shed with the other feathers. A plumule arises from a papilla situated alongside that of a contour (or true) feather, but the two are quite independent, for I have frequently found among the body-feathers during the moult a newly-

* These "pins" when examined under a microscope appear to consist of a series of semi-transparent inverted cups fitting one over the other, and I can detect no trace of feather-growth within them. In Plate 10, Fig. 26, one of these "pins" is figured but unfortunately the preparation was not sufficiently transparent to show the inverted cups.

growing contour feather with the plumule alongside it, old and unshed; yet the two are so close as to seem joined together, like the two barrels of a gun.

The skin of the chin is at first pink and soft, but soon gets hard and whitish after most of the contour feathers have moulted. The newly-grown, soft, degenerate contour feathers and the old plumules and filoplumes gradually wear down, but worn remnants of them are always to be seen with a glass until the autumn-moult.

By the time the chin is half-moulted, the small feathers and bristles on the bases of the lower mandibles begin to fall out (Plate 5, Fig. 14), and the moult creeps up to the region under the eyes and the lores, and lastly the bristles on the fore-head and at the base of the nostrils are lost (Plate 5, Fig. 15). In all these regions the proximal feathers fall first, and the last to be left are the bristles nearest to the nostrils and in the distal portion of the lores, and occasionally a few bristles remain here until the following moult. Some of the papillæ of these regions remain dormant and a distinct cavity is left where a feather has fallen out, but most produce "pins," which however grow only a millimetre or two above the skin and, unlike those on the chin, never appear to produce feathers, but remain as small rounded knobs.

The time at which this moult takes place no doubt varies individually, but it seems a lengthy process, and even at the beginning of June it is not complete in some birds, although by this time some primaries have dropped and the second autumn-moult has then commenced.

NOTE.—I have carefully examined the generative organs of all the specimens in first summer-plumage (i.e. one year or a little more old) and have not found any in a breeding condition. In the females the ova were always massed and scarcely visible separately, and the oviducts were invariably thin and straight throughout. The testes of the males were larger than in winter, those of first-winter birds measuring four or five millimetres and the largest of the first-summer birds (March and April) ten millimetres in length; but the testes of adults in April measured from seventeen to twenty-one millimetres. One female had a small incubating-patch, although the condition

of its oviduct proved that it had never laid eggs. In Volume IV., p. 370, Mr. E. Dunlop mentioned that he had once seen a Rook that was undoubtedly breeding which had the face only partially bare of feathers, and there is other evidence that such birds are sometimes present in Rookeries in the breeding-season. It seems just possible that such birds may act as "nurses," and I think the point would be well worthy of investigation, but it would be necessary after watching such birds at the nest, to secure them and examine their sexual organs.

At the moult into second winter-plumage, and at every subsequent autumn-moult when the bird is adult, the bare space on the chin and upper-throat becomes thickly covered with dark blackish-grey down (Plate 4, Fig. 9). This consists of the new plumules and filoplumes, which moult annually, and a varying number of degenerate plumule-like feathers growing from the true contour-feather papillæ, but many (probably the majority) of the first-summer "pins" remain and are not moulted. The degenerate feathers are exactly similar in structure (Plate 9) to those which grow here and there at the first summer-moult, but they are rather larger (about six to eight millimetres in length) and more numerous. Their rami and radii, being loose and comparatively long, spread in all directions and hide the "pins," so that the whole chin appears to be well covered.

Only a few minute degenerate bristles grow here and there on the nostril-region, fore-head, and on the sides of the lower mandibles, and these are scarcely noticeable without a glass. The papillæ of these regions appear to remain almost inactive at the moult, most of them showing no sign whatever of feather-growth. The "pins" which grew in the moult to first summer remain, and have become rounded and compacted. A varying number of filoplumes, however, grow in these regions, some specimens having many and others scarcely any.

Unlike the birds in their first year, there is now no further moult until the following autumn. The down on the chin and throat does not fall out, but becomes gradually worn down by abrasion (Plate 4, Figs.

10-13). An examination with a glass of the chins of a series of birds from August to January, shows the gradual effect of this wearing process very clearly. By January (and in some individuals in December) the chin and upper-throat look quite bare at a little distance, but a close examination shows that there are many remains of degenerate feathers and plumules and longish filoplumes, and these remains, getting smaller and smaller as the summer goes on, are still to be seen with a glass up to the autumn-moult. An examination under a microscope of a series of these feathers, taken from birds shot at intervals, shows that they are worn down gradually all round rather than broken off short (Plate 10, Fig. 25). They are of such a delicate nature that I am inclined to think this shows that they cannot often be subjected to violent friction, and that when the Rook digs it does not usually allow its chin and throat to touch the ground. Indeed, it would be hardly possible for it to thrust its head so far into the ground as to touch the lower part of the bare patch on the throat, while the portion of the chin which lies within the angle of the mandibles would be protected to a certain extent by the projecting ridges of the mandibles. When we consider the abrasion which goes on in a normal contour feather, the action of wind and weather alone, it seems to me, is quite sufficient to account for the wearing away of this delicate "down." A line of "down" just alongside and parallel to each lower mandible (Plate 4, Fig. 12), remains unworn longest, but this is not because the projection of the mandible protects it from friction by "digging," but because this part of the skin folds inwards when the "pouch" is empty, and the "down" along this "crease" is thus not exposed.

I much regret that owing to a want of knowledge of the process of feather-development, I have been unable to investigate the cause of the debility of the feather-papillæ. I hope that someone who has studied

feather-development will take up this question and I shall be most happy to lend what material I have to help in its elucidation.

A comparison between our Rook (*Corvus frugilegus frugilegus*) and the Eastern Rook (*Corvus frugilegus pastinator*) is interesting, because it shows, I think, that our Rook has proceeded further in its evolution than the Eastern form. This bird, which inhabits Eastern Siberia, China, and Japan, is very similar to ours in first winter-plumage, but the adult has only the nostril-region and a very small patch on the sides of the lower mandibles bare, the chin, throat, and lores being feathered (Plate 5, Fig. 16). In two specimens, however, I found a very narrow line of bare skin down the centre of the chin from the angle of the mandibles, and in this bare skin were "pins" like those on the chin of our Rook. Two other specimens had some "pins" on the chin which were concealed by the feathers. These facts, taken in conjunction with the fact that there is a considerable growth of degenerate feathers at every moult on the chin of our Rook and scarcely any on the nostril-region, show, I think, that the bare chin is of comparatively recent development. It should also be noted that in *Corvus f. pastinator* the feathers on the chin and upper-throat in first winter-plumage have the rhachis much elongated, as is the case in our bird. In the adult, however, though the feathers on the upper-throat are exactly like those in first winter-plumage, the feathers of the chin within the angle of the lower mandibles have the rhachis much less elongated and sometimes not at all. Moreover, these feathers in the adult, instead of sloping in a normal manner away from the point of the bill, stand up at right angles to the skin, and thus give the chin a "furry" appearance (Plate 5, Fig. 16).

PART II.—THE SEQUENCE OF PLUMAGES.

Male and Female.

Down-plumage.—Dusky grey; skin of body black.

Distribution.—Humeral, spinal, ulnar and femoral (*vide* A. G. Leigh, Vol. IV., p. 73).

Juvenile-plumage.—Acquired while in the nest, the down-plumage being completely moulted.

Nasal bristles black, slightly glossy; *fore-head, crown* and *nape* black with a slight greenish gloss; *hind-neck* dull sooty-black; *mantle* and *scapulars* sooty-black with a slight purple gloss; *back, rump*, and *upper tail-coverts* sooty-black with a slight greenish gloss; *ear-coverts* and *cheeks* black, with a slight greenish gloss; whole of the *under-parts* sooty-black with a very slight greenish gloss; *tail* black underneath, greenish-purple above; *under wing-coverts* and *axillaries* brownish-black with a purplish gloss; *primaries* underneath brownish-black, above black with a purplish-green gloss especially on the outer webs and on the tips; *secondaries* underneath brownish-black, above outer webs purple, inner webs brownish-black with a faint purplish-green gloss, which is most marked on the two innermost feathers; *bastard-wing* and *primary-coverts* like the primaries but with more gloss on the outer webs; *greater coverts* like the secondaries; *median* and *lesser coverts* purple.

N.B.—All the body-feathers including those on the chin and the nasal bristles are of a much looser texture than in first winter. The feathers of the chin and upper-throat down to about fifty millimetres from the angle of the lower mandible have their shafts elongated and thickened at the tip, this portion being without rami, and the rami near the distal ends of the feathers are similar in structure and bear no radii at their tips. These feathers are also looser in general structure than those lower down on the throat, the radii being wide apart and not closely held together. The feathers of the chin, and especially those nearest the angle of the bill, are frequently white. The bases of the body-feathers and the underdown are brown-grey.

First Winter-plumage.—Acquired by a complete moult, with the exception of the remiges, bastard-wing, primary-coverts, majority of greater coverts (the two innermost only are moulted), and rectrices. The moult commences on the back and flanks, and the whole body and wing-coverts are soon involved, the head being the last to moult.

Nasal bristles glossy black; *fore-head, crown*, and *nape* glossy purplish-green; *hind-neck, mantle, scapulars, back, rump*, and *upper tail-coverts* glossy purple; *ear-coverts, cheeks, chin*, and *upper-throat* glossy purplish-green (the chin and especially its upper-part has very little gloss); *lower-throat, sides of neck, breast, belly, flanks* and *under*

tail-coverts glossy purple; *vent* sooty-black; *tibial-feathers* glossy purplish-green; *tail* as in the juvenile but of a more brownish-black underneath and with some of the gloss above lost by abrasion; *under wing-coverts* and *axillaries* sooty-black with some purplish gloss; *primaries* and *secondaries* as in the juvenile, but of a more brownish-black underneath and with some of the gloss above lost by abrasion; *bastard-wing*, *primary-coverts*, and *greater coverts* as in the juvenile, but with some of the gloss lost by abrasion, except in the two innermost *greater coverts* which are new; *median* and *lesser wing-coverts* glossy purple.

N.B.—The bases of the body-feathers and the under-down are of a paler brownish-grey than in the juvenile, i.e. not so brown, more grey. The structure of all the body-feathers is closer and more compact.

First Summer-plumage.—Acquired by abrasion and fading, except for the nasal and gape bristles and the feathers at the bases of the lower mandibles and on the lores, chin and upper-throat, which are moulted as described in Part I.

Even by January the greater wing-coverts, secondaries, and tips of the primaries are becoming brown and losing their gloss, while by April and May they are very brown with little or no gloss, and the under-wing is also brown. The tail also loses its gloss but does not get so brown as the wings.

The Rook does not breed in its first summer.

Second Winter-plumage.—Acquired by a complete moult, which commences early in May and is not complete until the middle of September. The order of the moult is as follows: Primaries, beginning at the tenth and proceeding very gradually to the first, each primary-covert being moulted with its primary.* It is not until the middle of June that the moult extends beyond the primaries and primary-coverts, and by this time only half the primaries have moulted; the greater wing-coverts then moult, and unlike the primary-coverts these all drop together (Plate 11); about the same time the upper tail-coverts begin, the secondaries and tail follow, and

* The same primary in each wing is moulted at the same time, and the new feather has always started growing before the next primary falls.

then the rump, back, flanks, breast and neck, and lastly the head, by which time the first primary, which is the last to moult, is growing and the bastard-wing is moulting. The moult of the primaries thus extends over some four or five months. The tail-feathers moult from the centre outwards on each side, while the order of the moult in the secondaries, though not invariably regular, is almost always in three groups, the first moulting first and being followed by the second, third, fourth, and fifth; the seventh is moulted before the sixth; and the eighth, ninth, and tenth are moulted in the order named at the same time as the first group is being moulted.

Like that of the first winter, but with the *nasal region, fore-head, lores, under the eyes* and *sides of the lower mandible* at its base practically bare of feathers, the skin being whitish and covered with short rounded "pins" or "knobs"; *chin* and *upper-throat* covered with mouse-brown "down"; *tail* like that of first winter but more glossed with greenish-purple; *primaries* and *secondaries* underneath deep black not brownish-black as in first winter: above, the *primaries* with a purplish-green gloss on the outer webs and a considerable amount on the inner webs, *secondaries* with a rich purple gloss on the outer webs and a greenish gloss on the inner webs; *primary-coverts* glossed with purplish-green; *greater-coverts* glossed with purple on the outer webs and purplish green on the inner; rest of the plumage like that of first winter.

Second Summer-plumage.—Acquired by abrasion only, there being no moult at all. The down on the chin is gradually worn away during the winter until by January (and in some individuals before) this region is practically bare except for the aborted "pins" and small pieces of "down" here and there and remains of filoplumes. From May until the following moult, the "down" and filoplumes are so worn down that their remains can scarcely be seen without the aid of a glass. The filoplumes and a few degenerate bristles in the nostril region also become gradually worn down.

The rest of the plumage becomes duller and browner, some of the gloss being lost by abrasion, especially on the wings and tail, but these never become so brown as in first summer.

Adult Winter- and Summer-plumages.—Acquired in exactly the same way and at the same times as the second-winter and second-summer plumages, and are indistinguishable from them.

N.B.—I can detect no difference in the plumage of males and females, but all the measurements of the males are larger, including the bare patches of the face. Thus—

ADULT MALES.						ADULT FEMALES.		
	No.	Min. & Max.	Average.	No.	Min. & Max.	Average.		
Wing	12	305-330	315.4	10	290-311	301.9		
Bill, from nostril to tip ...	12	35-40	37.4	10	31-38	34.7		
*From nostril to end of bare skin on fore-head	24	14-22	17.25	25	12-20	15.4		
*From nostril to end of bare skin on sides of face, i.e. under or just behind the eye.	22	29-37	32.3	23	28-34	30.0		
*From angle of lower mandible to end of bare skin on throat	21	37-66	50.9	21	35-55	45.1		

* These measurements were taken in the flesh.

EXPLANATION OF PLATES.

PLATE 4.—Rooks' heads.—*Fig. 1*, Juvenile (♂ June 6th, 1912). *Fig. 2*, Moulting from Juvenile to First winter (♀ Aug. 28th, 1912). *Fig. 3*, First winter (♂ Sept. 9th, 1912). *Figs. 4-7*, A progressive series of First-summer birds to show the moult of the chin. Degenerate feathers and "aborted pins" are growing on 4-6, while in 7 the moult is nearly complete, but a considerable amount of "down" remains. (*Fig. 4*, ♀ March 17th, 1913; *Fig. 5*, ♂ Jan. 30th, 1913; *Fig. 6*, ♂ March 17th, 1913; *Fig. 7*, ♂ April 24th, 1913.) *Figs. 8-13*, A progressive series of adults from the Autumn-moult to late summer. *Fig. 8*, In full moult in autumn (♀ Sept. 9th, 1912.) *Fig. 9*, The moult nearly complete, showing growth of degenerate feathers and plumules (♂ Sept. 14th, 1912.) *Figs. 10-13* show the gradual wearing off of these. (*Fig. 10*, ♂ Dec. 31st, 1912; *Fig. 11*, ♀ Jan. 30th, 1913; *Fig. 12*, ♀ Dec. 18th, 1912; *Fig. 13*, ♀ June 5th, 1912.)

PLATE 5.—*Fig. 14*, First-summer Rook—the same bird as in Plate 4, *Fig. 5*—to show moult on side of lower mandible. *Fig. 15*, First-summer Rook—the same bird as in Plate 4, *Fig. 7*—to show moult of nasal and forehead bristles. *Fig. 16*, Adult Eastern Rook (*C. f. pastinator*) (♀ Feb. 27th, 1912, Hankow, China), to show feathered chin.

PLATE 6.—*Fig. 17*, Photo-micrograph of feather from chin (22 mm. from angle of mandibles) of Juvenile Rook (♂ July 16th, 1912), magnified 7 diam. *Fig. 18*, Feather of First-winter Rook (♂ Sept. 9th, 1912) from the same region, magnified the same.

- PLATE 7.—*Fig. 19*, Portion of *Fig. 17*, magnified 18 diam. *Fig. 20*, Portion of feather from throat (80 mm. from angle of mandibles) of First-winter Rook (♂ Sept. 27th, 1912), magnified 18 diam..
- PLATE 8.—*Fig. 21*, Plumule from amongst feathers of chin (22 mm. from angle of mandibles) of First-winter Rook (♂ Sept. 27th, 1912), magnified 7 diam. *Fig. 22*, Portion of same magnified 18 diam.
- PLATE 9.—*Fig. 23*, Degenerate feather (newly grown) from chin of Adult Rook (♀ Sept. 14th, 1912), magnified 7 diam. *Fig. 24*, Portion of same magnified 18 diam.
- PLATE 10.—*Fig. 25*, Much worn degenerate feather and a filoplume from chin of Adult Rook (♀ March 10th, 1913) magnified 7 diam. *Fig. 26*, Piece of skin from chin of Adult Rook (♂ October 18th, 1912) showing an "aborted pin," magnified 18 diam.
- PLATE 11.—Wing of Rook (♂ May 27th, 1912) showing *Primaries* 1 to 5 old (6 is dropped and 7 and 8 are growing but are not far enough up to show); 9 and 10 new and nearly full grown. *Secondaries* all old. *Greater Coverts* all moulted and growing together before any of the secondaries are lost.

NOTES

PARENT-BIRDS REMOVING MATTER FROM THE GAPES OF NESTLINGS.

FOR some years now I have been paying particular attention to the nestlings of common birds. It is of course now known to all ornithologists that the parents keep the nest clean (as a general rule) by carrying away the excrement, and often by swallowing it, during the early part of the nestling-period.

While watching these operations I noticed that, after feeding the young, the old birds almost always examined the gapes of the nestlings and often removed something from them. It was not at all easy to come to a conclusion as to what was removed, for it was usually impossible to obtain anything for examination, especially as most of the parent-birds swallowed what they removed. I feel convinced, however, that what is removed is either food which the nestling has not swallowed, or it is undigested matter that has returned to the gape. In the case of some of the warblers (Greater and Lesser Whitethroat, Blackcap, and Willow-Warbler especially) I have noticed that the matter removed often has the appearance of a caterpillar-skin, and I feel certain that the skins of caterpillars cannot be digested by the nestlings and are disposed of in this way. Dr. Wills and Mr. R. Iremonger both watched a Lesser Whitethroat's nest with me, and also considered that this was the case.

I have also seen matter removed from the gape of nestling Cuckoos. Generally this was swallowed but once I saw it dropped by a Common Whitethroat. I was in a "hide" at the time and was afterwards unfortunately unable to find what the bird had for it fell into some rather tall after-math. So far as I could see it had the appearance of wings of various flies. Mr. H. Armytage Sanders, when photographing a Cuckoo-nestling eight days old, saw the Hedge-Sparrow foster-parent remove a white "blob" from the Cuckoo's mouth and swallow it. This, I think, must have been a caterpillar-skin. At the time the Hedge-Sparrows also carried away the excrement of the young Cuckoo, for we saw it done several times. I have also examined a Cuckoo immediately after it was fed, and found no trace of food in the gape. I then waited until I saw the Hedge-Sparrow foster-parent approaching with food, and before it reached

the nest I examined the Cuckoo again and found that the gape then contained the remains of more than one fly. On another occasion I saw a cock Reed-Bunting put a caterpillar on the edge of the nest and remove something from a Cuckoo's gape.

Unfortunately my time is too limited to enable me to investigate this matter thoroughly, and I only wish to suggest that here is an interesting little problem for ornithologists to solve.

J. H. OWEN.

BREEDING-HABITS OF THE MARSH- AND WILLOW-TITS.

WHEN writing the paragraph to which Mr. Coward refers (*antea*, p. 116) in the *British Bird Book*, Vol. II., p. 180, practically the only available published account of the nesting of the Willow-Tit in Great Britain was that of Mr. A. Dixon, which first appeared in the *Field* (May 21st, 1904), and which is referred to by Dr. Hartert, in the *Bulletin B.O.C.*, XIV., p. 79, and by Dr. Ticehurst in the *Birds of Kent*, p. 81. Like most field-ornithologists, I was aware that wide differences existed in the nesting-habits of "Marsh-Tits," and over twenty years ago I had found what I now know to have been the Willow-Tit nesting in west Suffolk, but at that time the distinctions in the appearance and notes of the two species had not been pointed out. It was therefore only possible to write cautiously on the subject, and the untidy way in which the chips were left lying about by the pair of Willow-Tits watched by Mr. Dixon was specially commented on by him.

During the past season I have been accumulating notes on the breeding-habits of these two species, in order to ascertain whether the distinctions which are supposed to exist in their nests are constant, and provide reliable material for identification. On the whole the results are satisfactory and confirm our surmises, as may be seen from the details given below.

BRITISH WILLOW-TIT (*Parus atricapillus kleinschmidti*).

The birds observed by Mr. Dixon in 1904 were first noticed while excavating a nest-hole in a small decayed willow stump, about two feet high. On several occasions he noticed that the chips were left directly under the nest-hole. On May 9th the bird was caught on the eight eggs, which were heavily marked with red spots. The nest is described as "untidy and scanty, but of similar construction to that of most Tits." Dr. Hartert identified the bird in this case as the British Willow-Tit.

On May 19th, 1913, Mr. P. C. Dutton found a nest-hole of this species near Stone, Staffordshire, about three feet from the ground, in a rotten stump in a clump of evergreens. This was close to the place where an exactly similar nest was found by him in 1911, and as the two agreed in every detail, the nests may safely be ascribed to the same species, and probably to the same pair of birds. In 1913 the hen was sitting on a clutch of eight eggs, which were much incubated, and the nest consisted simply of a shallow cup of felted down mixed with a few small feathers and fibres of rotten wood. The down used was apparently that of the rabbit, but vegetable down was mixed with it, and there was no foundation of moss whatever. The nest-hole was neatly drilled out by the birds, and led into a well-rounded cavity, which had evidently been recently made. The hen-bird from this nest had the characteristic dull, unglossed crown and was undoubtedly a Willow-Tit. The nest of 1911 was in a rotten willow-stump, about two feet from the ground, and contained nine hard-set eggs on May 21st. The nest-hole, which was cut out by the birds, was very neatly drilled, and was six inches deep. There was no moss, and the whole of the felted lining of rabbit-down only weighed as much as a sixpenny-piece. The eggs were not heavily marked, and there were no chips lying about.

Mr. H. W. Williamson sends some notes on a nest of a Willow-Tit, which was bored out in the stump of a storm-snapped alder, about three inches in diameter, in a wood in Kent.

On May 7th the hole was about nine inches deep, and on May 13th it contained four eggs, which were not covered up. The nest was a slight structure of felted material which looked like tow, and was probably composed of down with a few small feathers. In this case also there was no foundation of moss, the felted layer being only about a quarter of an inch in depth and having no perceptible hollow in the middle. The hen, in this case, was caught on the nest and examined carefully before being liberated.

In a fourth case, in which a nest was found at Willington, South Derbyshire, by the Rev. W. M. Tomlinson, the nest and site agreed with those already described except that wood fibres and chips were present in greater quantities and there were more feathers than in the Staffordshire nests, but less down. The bird was not caught, but was described as having a dull black head without gloss. The

amount of nest-material in this nest was very small and there was no moss.

A nest with five eggs found at Little Thurlow, Suffolk, on June 8th, 1891, was conspicuous on account of the clean-cut circular entrance. The opening descended almost perpendicularly, and the nesting-chamber contained a scanty lining of willow-down. Another nest found on May 9th, 1899, in Staffordshire, had a recently excavated circular opening, and was about five feet from the ground in a pollarded willow. A short passage led to the nest-hole, neatly chipped out of the soft wood, and the nest was a pad of rabbit's fur mixed with a few hairs and particles of rotten wood. It contained eight fresh eggs, sparingly marked with small reddish spots. The birds were not secured in either case, but the characteristic notes of the Willow-Tit were heard and noted. No chips were left about below the nest-hole.

To summarize, it will be seen that in every case the nest was extremely scanty, in fact little more than a layer of down. In no case is moss mentioned as forming part of it, although it is characteristic of the other Tit's nests. In the case of the nest noted by Mr. Coward (*antea*, p. 116) the chips were carefully removed, while the birds observed by Mr. Dixon left them lying about, but in none of the other nests were they noticeably present, so that it is clear that this character is unreliable. In every case the whole of the nesting-chamber and entrance appeared to have been excavated by the birds themselves. The eggs found by Mr. Dixon were heavily marked, but those taken by Mr. Dutton and myself are on the other hand only lightly spotted, so that this character is also apparently variable.

The late Dr. O. Ottosson informed me that in Sweden the nest of the Northern Willow-Tit (*P. atricapillus borealis*) could always be distinguished from that of the local race of the Marsh-Tit by the fact that it consisted simply of a slight pad of felted down, hair, etc., with no foundation of moss, in a hole worked by the birds themselves.

BRITISH MARSH-TIT (*Parus palustris dresseri*).

On June 2nd, 1913, I examined a Marsh-Tit's nest at Thorpe, Derbyshire, which contained well-grown young, which were being fed by both parents with caterpillars. It was placed in a natural hollow in an alder-stump in a hedge-row, the entrance being directly above the nest. The hole was not a large one, but there was a substantial foundation of green moss, and on the top of this was the

felted hair-lining usually found in Tits' nests. No excavation had been done by the birds in this case.

Dr. N. F. Ticehurst informs me that the Marsh-Tit occasionally breeds in nesting-boxes, and that the amount of moss used by way of foundation varies according to the size of the hollow, but it is always distinctly less than in the case of the Blue, Great, or Coal Tit.

The South European Marsh-Tit (*P. palustris stagnatilis*) also has the same characteristic habits, for a nest found by me in 1910, in Roumania, was in a natural hollow in the trunk of a rotten tree, the opening only very slightly enlarged by the birds, and the bottom of the hole for eight or nine inches being filled with moss, on the top of which the warm nest of felted hair, etc., was placed.

Most of the nests and eggs in collections have been taken as "Marsh-Tits" and may belong to either species, and the same may be said for most of the observations recorded, so that material for reliable distinctions is scarce. F. C. R. JOURDAIN.

PIED FLYCATCHER ON MIGRATION IN SUSSEX.

ON August 29th, 1913, my son Geoffrey shot an adult female Pied Flycatcher (*Muscicapa h. hypoleuca*), on the edge of St. Leonards Forest, about a mile from Horsham: it was feeding with a party of Spotted Flycatchers. This bird very rarely appears on migration in west Sussex, this being the first time I have seen it within the last twenty years.

J. G. MILLAIS.

COLOUR OF THE BEAK IN THE EIDER.

WITH regard to Mr. H. W. Robinson's criticism (*antea*, p. 119) concerning the bill of the adult male British Eider (*Somateria m. mollissima*), I must dispute the fact that it is orange-yellow at the base in life. In saying that it is "green" it must be taken into account that there are various shades of green, and in this case the portion alluded to is a very yellow-green to olive-green. I do not think that the specimen to which Mr. Robinson refers (that in the Oldham Museum) has any bearing on the case, as the bill of the Eider fades to various colours immediately after death, which are not seen in life. As regards the colour of the bill of the adult female in life, it is generally bluish-grey—but there is often a greenish-yellow tinge about the base. J. G. MILLAIS.

COMMON SCOTERS OFF CARNARVONSHIRE IN SUMMER.

MR. T. A. COWARD's reference to the large numbers of Common Scoters (*Oidemia n. nigra*) in Liverpool Bay in

June, 1913 (*antea*, p. 118), is especially interesting, as it tends to confirm what I myself observed in 1912, a report on which appears in Vol. VI. (pp. 158-9) of this magazine. Last year I missed the birds altogether after August 8th, but this year they have remained off the North Wales coast during the whole summer and are still here (September 6th), though compared with last year they do not appear to be quite as numerous. Regularly each evening flocks, large and small, comprising black and brown birds, may be seen from the Great Orme's Head, winging their way from the east and passing to the west where, off the Anglesey shores, they spend the night, only to return the following morning to their feeding-grounds in Liverpool Bay. This year I noticed the first flocks on June 22nd, the same date on which they were first observed in 1912, though this may be nothing more than a coincidence.

RICHARD W. JONES.

BREEDING-HABITS OF THE STEGANOPODES.

IN his paper on the Steganopodes, pp. 94-100, Mr. Jourdain cites my mention of the earliest eggs of the Shag (*Phalacrocorax g. graculus*) known to me in 1900, as having been seen on April 6th. I have since been favoured with an earlier record by Mr. F. Hyde Maberly, of Beechmount, Crosshaven, co. Cork, who has written: "29th March, 1908.—On the 23rd inst. (March) I took three fresh Shag's eggs from a nest on a cliff ledge at Robert's Head, getting within a few feet of the bird before putting it off. There were three Shag's nests nearly finished at the same place on March 4th."

As the Shag nests in sheltered places—such as dens in boulder-clay, hollows under fallen masses of rock, ledges in the mouths of caves, and on the lower parts of overhanging cliffs—it is more likely than the Cormorant to escape observation, and to lay early: as the Puffin, which lays in holes, breeds earlier than the Guillemot, which lays on open rocks.

R. J. USSHER.

IN view of Mr. Jourdain's article on the nesting of the Steganopodes, in your last number, it may be interesting to state that the Cormorant seems to be an earlier nester than the Shag in the Scilly Isles. During my visit to the islands towards the end of May, 1911, the only colony of Cormorants which I came across was on the island of Maleggan, on May 22nd, and here all the nests contained young, varying from fully-fledged birds almost ready for flight to naked nestlings only a few days old; whereas Shags' nests, which were extremely numerous on all the islands, still contained eggs, no young at all being seen—

indeed the majority had not even finished laying, a very large number containing but one egg. H. W. ROBINSON.

LATE NESTING OF DABCHICK.

ON Sunday, August 24th, 1913, I saw three young Dabchicks (*Colymbus r. ruficollis*), about one day old, on a pond in Hertfordshire. I caught one for identification and afterwards released it. J. BEDDALL SMITH.

[Although fresh eggs of the Dabchick may frequently be found during the month of June and up to the end of July, it is unusual to find them later. As the period of incubation in this species is about twenty to twenty-one days, the eggs in question must have been laid by about August 2nd. Eggs laid late in July obviously do not hatch out till towards the third week of August, but occasionally nests with fresh eggs have been met with even in September. Mr. W. Mackay Wood records a clutch of four eggs from Brinscall, Lancashire, on September 7th, 1907, and another nest with an incomplete clutch of two eggs on September 8th of the same year, at the same locality (*Brit. Birds*, II., p. 242). In Mr. E. W. Nelson's *Birds of Yorkshire*, II., p. 747, there is a reference to a late brood in September, 1896, near Harrogate, but in this case the birds had been repeatedly disturbed.—F. C. R. JOURDAIN.]

INCUBATION PERIOD OF THE COMMON SANDPIPER.

WITH reference to Mr. H. B. Turney's communication (*antea*, p. 86) on the incubation period of the Common Sandpiper (*Tringa hypoleuca*), I should like to add a few dates from my notes, which I think should definitely settle the incubation period.

I am fortunate in being able to watch these birds very closely, having no less than a dozen pairs within a mile of my home. I have also on several occasions found their nests before the full complement of eggs have been laid.

The following dates cover four years and only those cases in which I could be certain of the dates are noted :—

<i>Last Egg.</i>	<i>Hatching.</i>	<i>Days.</i>
1909 May 7	May 28	21
1910 „ 8	„ 29	
1912 „ 12	June 2	
1913 „ 10	May 31	

By leaving out the day on which the last egg was laid and counting the day of hatching, the incubation period in each case is exactly twenty-one days. JAMES D. PATTERSON.

COMMON TERNS BREEDING IN ESSEX.

SINCE writing the account of the colony of Common Terns (*Sterna hirundo*) in north-east Essex (*antea*, p. 87) my attention has been called to an article by Mr. T. Hepburn in the *Zoologist*, 1910, p. 137, on the "Nesting of the Common Tern and Black-headed Gull in Colchester Harbour." Mr. Jones has interviewed Mr. Hepburn and ascertained from him that the Ternery there described is the same as that which I reported. Mr. Hepburn thinks it has been continuous since his discovery of it, but does not know how long it had existed before then.

W. B. NICHOLS.

SANDWICH TERNS IN CARNARVONSHIRE.

THE two records in Mr. H. E. Forrest's *Fauna of North Wales* (pp. 370-71) led me to suppose that the Sandwich Tern (*Sterna s. sandvicensis*) was an extremely uncommon bird in the northern half of the Principality; but, while admitting that the species may have been rare say ten years ago, the numbers I have seen in Llandudno and Conway Bays this year (1913) make me feel that the bird has been overlooked during the past few years in North Wales. The three birds which I watched in the Conway Estuary on May 21st, 1913, constituted a new record for the county. Their loud double-note drew my attention, and on getting closer to them I could see with my glasses their long, lemon-tipped black bills and black legs, and readily appreciated their superior size. I saw five others in May, four in June, seventeen in July, and four or five times the latter number in August. One flock which I saw at Deganwy on August 3rd contained thirty birds. We naturally wonder whether the Terns were Ravenglass birds.

RICHARD W. JONES.

SQUACCO HERON IN THE OUTER HEBRIDES.—Mr. R. Clyne (*Scot. Nat.*, 1913, p. 211) records an adult male Squacco Heron (*Ardeola r. ralloides*) as seen by him on June 5th, 1913, at a loch near the Butt of Lewis, where it remained for over a week.

SCAUP BREEDING IN THE OUTER HEBRIDES.—In the *Scottish Naturalist*, 1913, p. 211, Mr. Heatley Noble states that a Scaup (*Nyroca m. marila*) hatched off a brood of young on one of the Outer Hebrides in June, 1913. A friend of his saw the female with the brood, and sent Mr. Noble an addled egg together with the down. The keeper also stated that it was by no means the first time a Scaup had hatched off on this property.

LETTER.

ON INCUBATION.

To the Editors of BRITISH BIRDS.

SIRS,—In the article on Incubation, by Mr. Eric B. Dunlop (*antea*, p. 109), the writer says: "Another bird which rears few young compared to the number of eggs it lays is the Great-crested Grebe. Four or five eggs are very frequently deposited, but it is not usual for more than two young to be brought to maturity. Mr. Edward Tristram suggests . . . that when the first one or two chicks are hatched the parents at once leave the nest with them, regardless of the remaining eggs which have not hatched out."

During the past five years there is no bird which I have watched and photographed more than the Great-crested Grebe, and during this time I have had not less than fifty nests under observation, and my experience is that in the great majority of cases four young are reared where five eggs are laid, and three when the nest contains only three eggs. It is commonly thought that this Grebe only rears two young, and this idea has no doubt been brought about through the habits of the birds. When the first two young leave the shells the male bird almost invariably takes care of them, and they are led away from the nest, but the hen remains sitting on the other eggs until the one egg hatches, if there should be only one left, or if there are three, she will sit until two more eggs hatch. Then she will desert the fifth egg, and take her two young out on to the lake, but she does not interfere with the male bird. Each parent bird will look after its two young until they are about a month or six weeks old; after that time they will be seen together, but if alarmed in any way the young will quickly swim towards their respective parents, and if not too large, hide under their wings, when the birds dive and carry the young to a place of safety.

On the lakes where I have observed these Grebes, I have been surprised to find that there are so many pairs which do not nest. During the past summer there were over forty pairs, but although the whole of the suitable nesting-parts were most carefully searched, I found that only fifteen of these pairs were nesting, and it is interesting to know that in one corner of the largest lake there was quite a colony of nests: seven containing eggs were found on a piece of reed-covered water about ten yards square. This is a thing I have never seen before, for usually they resent other birds of their own species coming to their particular portion of the lake.

Those pairs which did not nest were, as late as the middle of July, still going through their curious courting exercises, that is, facing each other, with necks extended, frills open, and crests raised, and at short intervals almost touching beaks and giving the head a peculiar shake. If another Grebe came near them, the male immediately placed himself in fighting attitude.

OLIVER G. PIKE.

WINCHMORE HILL, MIDDLESEX, *September 5th*, 1913.

[The Great-crested Grebe breeds in large colonies on some of the bigger sheets of water on the Continent, and small colonies have been met with occasionally in the British Isles, as for example in the West of Ireland, where Mr. J. Henderson found several pairs breeding close together; *cf.* also Yarrell, 4th ed., IV., p. 118. Seebohm (*History of British Birds*, III., p. 456) describes the large colonies on the Lantow See and Garda See in Pomerania, and numerous other instances are quoted in the *Neuer Naumann*, XII., p. 73.—F. C. R. JOURDAIN.]



“ within two feet.”



“ with haughty mien and upcurved beak.”

THE RED-THROATED DIVER.

Photographed by Miss E. L. Turner.



"ungainly as a seal."



"she came up from the dive."

THE RED-THROATED DIVER.

Photographed by Miss E. L. Turner.



"she scrambled on to the bank"



Turning the Eggs.

THE RED-THROATED DIVER

Photographed by Miss E. L. Turner.



"stretched out her neck and listened."



"covered with iridescent raindrops."

THE RED-THROATED DIVER.

Photographed by Miss E. L. Turner.

BRITISH BIRDS

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THE RED-THROATED DIVER IN ITS BREEDING-HAUNTS.

BY

E. L. TURNER, HON. MEM. B.O.U.

(PLATES 12-15.)

WE can hardly imagine a greater contrast than that which exists between an English hedgerow in early June and the haunt of the Red-throated Diver. In the one :

All little birds that are
How they seem to fill the sea and air
With their sweet jargonings.

And if the birds are silent, there is the hum of insect-life, and the thousand and one indefinable sounds which make summer.

But the locality chosen by the Red-throated Diver (*Gavia stellata*) for the up-bringing of its young, is remote from man, and pervaded by a silence often so profound and absolute, that the sudden rattle of a focal-plane shutter startles the photographer as much, and perhaps more, than it does the bird. After hours of long waiting, when one is tired and dispirited, the wild call of the Red-throated Diver is enough to make one's flesh creep: it resembles the cry of a little child in pain, but is more akin maybe to the wail of a lost spirit, echoing and re-echoing round the lonely hills.

I made two unsuccessful attempts at photographing this species; the first bird was shy and refused to sit for me. On May 26th I waited nearly three hours in a hole two feet square, cut in the peat and covered with a tiny tent. The water gradually oozed through till up to my knees, and soon rendered the situation impossible. On June 3rd I tried again, but waited in vain for seven hours. The nest was on the edge of a deep and dark little mountain-tarn above the main loch; from my peep-hole I could see several Greater Black-backed Gulls brooding on the moor, and between

1.30 and 2 p.m. five of these birds came to feed round the tarn; they were in a great hurry, and evidently bent on making the most of their time. There was another pool higher up, and at 3 p.m. a Red-throated Diver, which I took to be my bird, alighted there and began to play about; the light was fine and the bird looked beautiful, turning and twisting, diving, shaking its wings and preening itself. I waited—all excitement—hoping every moment that it would return to its maternal duties; but when, after some two hours of this irresponsible behaviour, the bird quietly settled down to sleep with its head and neck twisted over its back, and just floated idly with the wind, it suddenly dawned upon me that such callous behaviour could only be the result of masculine indifference.

Meanwhile, I had taken advantage of the Diver's comparative remoteness, to re-focus and change my plate, thereby making a considerable rustling inside the tent. Becoming suddenly aware of my mistake and its probable results, I gently thrust a hatpin through the back of the tent, and by placing one eye close to this tiny hole, surveyed that portion of the tarn which was behind me. Great was my annoyance at finding the female lurking within two feet of my tent, where no doubt she had been all the time her mate was enjoying himself in the upper pool. My chances were spoilt for that day, as it was then 6 p.m., so I merely photographed the eggs, moving my camera near the nest in order to do this. When unscrewing my big Zeiss lens, it gave a kick at the last turn, spun out of my hand and rolled into the tarn. My depression was then complete and only the stentorian commands of the gillie prevented me from following the lens: the tarn was deep and dark as the inferno is said to be. The next day, however, a solemn procession consisting of the two keepers, Miss Haviland and myself, armed with poles and landing-nets, set out to recover the lens; and after a while it was deftly hauled up by the

head keeper, absolutely unhurt—quite the most valuable fish that had ever been landed in that net! I had no desire however to revisit this spot, and as Miss Haviland had successfully photographed a much more amenable bird in another locality, I repaired to that Diver, and during three days, June 9th, 10th and 23rd I exposed seventy-two plates.

This second nest was also situated on the edge of a little pool above a larger loch; about a mile from the one and only road round the island. On leaving the road we had to keep along the edge of a low ridge for three parts of the way, then descend abruptly to the tarn. Directly anyone appeared on the end of the ridge the Diver slipped into the water, and as the intruder approached the nest, she either took wing and circled round one's head, or else swam to the far end of the pool and watched; but as soon as quiet reigned she returned to the eggs and no amount of movement inside the tent would put her off. She seemed curious and interested. Each day I came out of the tent to eat my lunch, and sat a few feet from her, photographing her at intervals. Once I tried to stroke her on the neck but that was too great a liberty on my part, though she allowed me to keep within two feet (Plate 12) before diving off; even then she returned at once when I retired, merely giving me a glance of scorn, as with haughty mien and upcurved beak a trifle more tip-tilted than usual, she swam swiftly up to the bank (Plate 12).

The Red-throated Diver is a beautiful bird; personally I prefer it to the Black-throated Diver, though the latter may be considered the more handsome species; nevertheless when seen at close quarters the Red-throated possesses a quiet and unsurpassed beauty of her own. In bright sunlight the colour of her head is a soft pale grey, a fit setting for the splendid ruby eye; the longitudinal stripes down the back of the neck and the poise of the head add dignity to the bird,

and one could almost imagine she was consciously proud of the brilliant crimson gorget worn during the breeding-season. And indeed she probably is, for what feminine thing—or masculine either—is not conscious of its charm?

On dull days the head looks dark slate-grey which exactly tones with the sullen water, and in all lights the white line along the upper mandible tends to merge the bird into its surroundings. In the water all the movements of this Diver are characterized by a dainty grace—out of it she is ungainly as a seal (Plate 13). When you see her shuffling up to her nest you feel you would like to walk behind and help her; the breast-feathers become stained and discoloured from contact with the moist peaty earth as she struggles clumsily up the bank. On returning to the eggs she usually dived when within twenty yards, re-appearing close to the bank. On one occasion I was lucky enough to catch her just as she came up from the dive, the photograph showing only the head and neck, with a swirl of water where the body is about to emerge (Plate 13).

She scrambled on to the bank at a point immediately opposite the camera (Plate 14); generally one bound landed her close to the eggs; she then flopped down somewhere within touch of them, and fell forwards, thrusting the eggs very far aft with her bill. Every two or three hours she stood up and turned them (Plate 14), then fell forwards again. For the most part she sat gazing out over the moor, sometimes wide awake and suspicious, frequently dozing; now and again she played with loose bits of grass within reach. Often she moved her head from side to side with rapid, sinuous twists as if looking for her mate—whom I never once saw—but nothing seemed to scare her. Once I had a prolonged and violent fit of coughing, and when this occurs birds are usually scared out of their wits; but the Diver only stretched out her long neck and listened (Plate 15), resuming her usual nonchalant air as soon as the unwonted sounds were over. At the last I took down the

tent, packed up everything and walked away without in the least disturbing her serenity. During a heavy shower the bird was covered with iridescent raindrops (Plate 15), which she made no attempt to remove. Did the self-conscious beauty realize the additional charm imparted to her plumage by this delicate network of rare jewels?



"deliberately took a header."

When leaving the nest she usually dived off quite suddenly, but once she stood up and deliberately took a header into the water, then swam round and round the tarn, preening her feathers, stretching and flapping her wings and drinking, but on no occasion was she absent from the nest for more than five minutes.

No two birds of the same species could possibly present a greater contrast than did the two pairs of Red-throated Divers I tried to photograph. The first, shy, bird was generally accompanied by her mate, whereas the second, perfectly amenable one, might almost have been alone in charge of the eggs.

The first had been sitting a fortnight when I went to her the second time, yet she was as shy and wild as

possible ; while the second Diver had fresh eggs on June 3rd, when Miss Haviland first photographed her, and did not hatch out till June 25th ; another striking illustration of variety of temperament in individual birds of the same species, for both were nesting in utterly wild surroundings, and under precisely the same isolated conditions.



“ stretching and flapping her wings.”

As I climbed the brae after my last visit to the Diver, I stood and had one long final look at the bird which had given me so much pleasure, and the wild moorland and bog which surrounded her. Though I must have been sharply outlined against the horizon, she merely turned her head and watched me out of sight. I left her with a feeling akin to remorse, for I am not likely ever to see this beautiful species “ at home ” again ; but I soon cheered up at the thought of the many I should see around our Kentish coasts during the winter, not alone and brooding midst the silent hills ; but gay and buoyant, riding at ease beyond the breakers whose dull roar and backwash make music and companionship alike for bird and bird-lover.

DR. L. BUREAU'S WORK ON THE PARTRIDGE.

BY

N. F. TICEHURST.

IN Vol. V., No. 8 (I.I.12), pp. 210-18, we had the pleasure of drawing the attention of British ornithologists to Dr. Bureau's work on the Common Partridge (*Perdix p. perdix*). His second memoir, dealing with the Red-legged Partridge (*Caccabis r. rufa*) has now appeared* in a similar volume of 143 pages, illustrated with fifty-four plates and diagrams, the result of seventeen years of field-work. It is even more replete with diagrams and facts than the former volume, and though the wealth of detail will doubtless prove somewhat wearisome to the ordinary sportsman, it cannot fail to be of interest to the working ornithologist, and bears eloquent testimony to the care and accuracy with which the author has carried out his task. The present memoir is planned on the same lines as its predecessor and the same methods of study have been pursued, so that there is no need here to recapitulate the ground-plan of the work, which was dealt with fairly fully in considering the first memoir (Vol. V., pp. 210-12). On page 74 will be found the author's "Chronometric Table," similar to that of the Common Partridge, whereby anyone can determine the age of a young Red-legged Partridge from the 29th day (when its juvenile tenth primary is lost) up to the age of 130 days, when the third primary of the first winter-plumage is full-grown and the bird itself is full-grown, and through its first moult, which in Loire Inférieur, whence the author's material was derived, occurs about the beginning of November. As has already been implied (*antea*, Vol. V., p. 348) by Mr. Heatley Noble, in pointing out the distinction between old and young Red-legged Partridges—viz., the pointed extremity and yellowish-white spot on the inner web of

* Louis Bureau: *L'age des Perdrix*.—II. La Perdrix rouge. Svo, pp. 143, fig. 54. Nantes. Vié, libraire, 28 Passage Pommeraye. London, Williams and Norgate, 14, Henrietta Street, Covent Garden.

the first primary of the latter—the first and second juvenile primaries in this species, as in the Common Partridge (and we may add also the Red Grouse, Willow-Grouse and Ptarmigan), are not lost at the first moult but are retained until the end of the second moult, when the bird is fifteen or sixteen months old. As was done in the case of the Common Partridge, we will now summarize the author's results of the progress of the first moult at the time when each primary is lost:—

THE YOUNG RED-LEGGED PARTRIDGE AT VARIOUS AGES.

When newly hatched. Down-plumage, top of head uniformly reddish; sides of head slightly tinted with red, and a brown spot stretching back from the eye; upper-parts and wings reddish-brown tipped with blackish-brown, on the back three longitudinal light-yellow bands, the median one narrow, the two lateral ones broader; throat and breast whitish; rest of under-parts light yellow; bill pink, shading to brown above; legs pink. Differs from the downy Common Partridge in that the latter has small dark chestnut spots on the top and sides of the head which become larger and more diffuse on the upper surface of the body.

At the 29th day the tenth primary is lost, the first has not appeared and the second has only just begun to grow. The bird wears a mixture of three plumages. The head and neck are still downy, the tail, wings (except the tenth primary) and the body-feathers belong to the sprouting juvenile-plumage, and the new tenth primary, just sprouting, belongs to the first winter-plumage. Bill blackish-brown; eye-lids red; feet and claws pale pink; weight 100 to 110 grams. It is capable of a flight of at least 100-150 metres.

On the 34th day the ninth primary is lost, and the new tenth measures about 22.7 mm. The second has grown to a length of 20-30 mm., and the first has just begun to appear. None of the secondaries have been shed. The body-feathers are entirely those of the juvenile-plumage, and a few of those at the top of the head still have the down adhering to them. Bill reddish-brown; eyelids and feet red; length 235 mm.; expanse 390 mm.; tail projects beyond wings 32 mm.; weight 140 grams.

On the 41st day the eighth primary is shed, the new ninth being 38.2 mm. long, the second 53 mm., and the first 29 mm. The third secondary is also lost about this time. The body

is fully clothed in the juvenile-plumage, which is characterized by light yellow and brown spots scattered over the secondaries, scapulars, and wing-coverts. Throat whitish, surrounded by a very narrow blackish-brown collar, not very evident; breast washed with light blue; belly ochreous; flank-feathers bluish at base and bordered with concentric bands of yellow, black, and russet. The first winter-plumage is beginning to show on the top of the head, back of the neck, and the top of the back as a uniform vinous tint. The tail has lost its middle feathers, and the new ones begin to grow. Weight (41st to 49th day) 172-220 grams.

On the 49th day the seventh primary is lost, the new eighth being 41.3 mm. long. The first and second measure 44 and 67 mm. respectively. The fourth secondary is lost about this time and the fifth about the 52nd day. The juvenile-plumage still covers most of the head, neck, wings and throat, and is still visible here and there on the breast, abdomen, and flanks. The rest of the upper-parts are clothed in the first winter-plumage, which is now traceable below in the black spots on the side of the neck and a row of the new tricoloured feathers on the flanks. The tail still retains the two outermost pairs of juvenile rectrices, and the new central ones project beyond them. Length 305 mm.; expanse 505 mm.; tail projects beyond wings 44 mm.; weight 220-272 grams.

On the 58th day the sixth primary is dropped, the new seventh measures 44 mm., and the first and second 62 and 80 mm. respectively. The sixth secondary is shed about now, the seventh about the 60th, and the eighth about the 62nd day. Body-plumage and tail much as before, but the two central rectrices now project about 10 mm. beyond the long upper-coverts. Males can generally be distinguished from females by their thicker tarsus and the one or more large scales on its inner surface, the site of the future callosity. Weight 283 to 313 grams.

On the 70th day the fifth primary is lost, and the new sixth has reached a length of 56.3 mm. The second is full grown, and the first measures 100-103 mm. The body-plumage, except parts of the head and the outermost row of flank-feathers, is mainly that of the first-winter, the scapulars, median wing-coverts, and seven inner secondaries are still those of the juvenile-plumage, only the outermost pair of rectrices of this plumage are left. Length 340 to 350 mm.; expanse 515 to 520 mm.; tail projects beyond the wings 70 mm. Weight 300-385 grams.

On the 75th day, when the new fifth primary has grown 20-25 mm., the second and ninth secondaries are lost.

On the 80th day, when the new fifth primary has grown to 45 mm., the tenth and sometimes the first secondary is dropped, but more frequently the latter is retained until after the loss of the fourth primary. About this time also some young birds renew the scales of the feet.

On the 84th day, the new fifth primary being 64.5 mm. long, the first indication of the callosity on the tarsus of males may sometimes be felt.

On the 86th day the fourth primary is shed, the new fifth being 72.4 mm. long. The first, second, and third juvenile primaries are full-grown. The plumage is practically that of the first-winter, except that the outermost row of flank-feathers, certain of the scapulars, and the three or four innermost secondaries are still juvenile ones. The new outermost pair of rectrices are about half-grown. The callosity in the males is now visible. Length (♂) 353-380 mm., (♀) 320-325 mm.; expanse (♂) 540-545 mm., (♀) 488-500 mm.; tail projects beyond wings 70 mm. Weight 295-415 grams. While the fourth primary is growing, the remaining secondaries are shed as follows: the eleventh on the 86th day, the twelfth on the 95th, the thirteenth on the 100th, and the fourteenth on the 105th, but the last-named may be retained until after the loss of the third primary.

On the 105th day the third primary is shed, the new fourth being 85.2 mm. long. The plumage is entirely that of the first-winter (except sometimes the innermost secondary), many feathers still retaining their sheaths at their bases. Tail, full-grown except the outermost pair of rectrices. Length (♂) 355-360 mm., (♀) 325-347 mm.; expanse (♂) 530-545 mm., (♀) 510-516 mm. Weight 402-465 grams.

On the 130th day the third primary is full-grown, the bird is also full-grown, and the moult finished.

THE MOULT OF THE SECONDARIES.

As in the Common Partridge, this takes place in two groups, an internal (3-15) and an external (1 and 2). The former are moulted from without inwards, and the latter from within outwards. The first to be shed (the third) is shed synchronously with the eight primary (41st day), the second about the 49th, and the first about the 86th day. The dates at which the others are lost have already been indicated.

THE MOULT OF THE TAIL.

The juvenile-tail on the 29th day is rounded in outline, very slightly hollowed out centrally, the feathers narrow and about 40 mm. long. It is full-grown by the 35th day, and its extremity forms a wavy line. By the 41st day the middle rectrices have been lost and the tail assumes a characteristic "Swallow-tailed" appearance, which, however, becomes daily less and less evident owing to the growth of the long central upper tail-coverts. By the 49th day only two pairs of lateral rectrices of the juvenile-plumage remain, but the new central ones, now 60 mm. long, project beyond them, and with the new short lateral rectrices, form an outline convex centrally with a concavity on either side. By the 58th day the central rectrices project 10 mm. beyond the upper coverts, but the outline remains much as before. By the 70th day only a single pair of juvenile-rectrices remain, and the whole tail is longer and more rounded. The last pair of juvenile-rectrices are lost about the 80th day and the whole tail is full grown by the 110th day.

DIFFERENCES BETWEEN THE FIRST AND SECOND MOULTS.

These are exactly as already outlined (Vol. V., p. 216) for the Common Partridge, with this exception, that in the second moult the middle group of secondaries comprises the third to the ninth in the case of the present species, whereas in the case of the Common Partridge the tenth and eleventh are included in this group also. The scales of the feet are renewed annually in autumn.

DETERMINATION OF SEX.

There are no plumage characters whereby the sexes of the Red-legged Partridge can be distinguished. Males are generally more stoutly built than females, and their weights tend to be heavier, but this is quite undependable. The tarsus of the male is stouter and bears a callosity on its inner surface. This is first visible about the 86th day, though discernible by touch sometimes as early as the 70th. At the age of two years a second nodule appears near the first, and at subsequent times others which eventually coalesce to form a nodular mass. Dr. Bureau does not mention any case of the growth of this callosity in the female.

DIFFERENCES IN DEVELOPMENT BETWEEN THE COMMON
AND RED-LEGGED PARTRIDGES.

The Red-legged Partridge is later in beginning its nesting operations than the Common Partridge, the difference in Loire Inférieur is at least a fortnight, though the dates seem to vary at least a week in districts to the north and south of the Loire. It is also slower in its development, the moult of the primaries starts five days later, the new feathers grow more slowly, and each grows to a greater length before the next one is dropped. Thus the difference is 5 days at the fall of the tenth, 7 at the ninth, 8 at the eighth, 10 at the seventh, 11 at the sixth, 15 at the fifth, and 19 at the fourth and third. On the other hand, the fourth and third primaries grow rather quicker than those of the Common Partridge, so that at the end of the moult it is only a fortnight older than a Common Partridge at the same stage (130 as against 116 days).

The remaining sections, in addition to the elaborate and ingenious methods of collecting data for the "Chronometric Table," and the application to it of the Tests and Controls, the whole illustrated with a wealth of tables and diagrams, deal with such subjects as pairing, nesting, eggs, incubation, local races, weights of old birds, weights of young birds at different ages, and methods of distinguishing young from old, both in the hand and on the wing. We have summarized above the major portion of the new work, and we must leave those interested to follow the other parts of the subject in the book itself. It cannot fail to be both instructive and of interest both to the sportsman and ornithologist, not only on account of the matter contained in it, but because of the painstaking care—it is everywhere evident—the author has bestowed on his investigations. Dr. Bureau is to be congratulated on the completion of a notable piece of work.

RECOVERY OF MARKED BIRDS.

THE annual article reporting progress for 1913 will appear, it is hoped, in the next number.

The following have kindly sent in subscriptions towards the expenses of the Marking Scheme since the last acknowledgment was made :—Miss C. M. Acland, Mr. James Bartholomew, Miss B. A. Carter, Messrs. C. T. Cobbold, W. Davies, T. F. Greenwood, J. H. Gurney, Miss M. H. Greg, Major-General V. Hatton, Messrs. G. W. Kerr, W. W. Lowe, H. T. Malcomson, A. Mayall, Captain W. Mackenzie, Dr. H. J. Moon, Mr. J. H. Owen, Mrs. Patteson, Messrs. W. J. Norwood Ryan and F. H. Taylor.

Besides the records given below, one hundred and thirty-three Black-headed Gulls have been reported since the last list was published (June 1913). We have not space to give full details of these, but we hope that it will not be long before sufficient recoveries have been notified to give material for a critical report on the results of ringing Black-headed Gulls.

Further, a number of Starlings ringed by Mr. Joy have been recovered, and these will be considered separately at a later date. As usual also, many recoveries (seventy since the last published list) of too little importance to warrant publication, have come to hand.

ROOK (*Corvus f. frugilegus*).—32270, adult marked by Mr. N. H. Joy at Bradfield, Berkshire, on July 9th, 1911. Recovered at the same place about February 20th, 1912.

32266, nestling marked as 32270 on July 7th, 1911. Recovered at the same place on May 1st, 1912.

JACKDAW (*Colæus m. spermologus*).—21549, adult marked as 32270 on June 30th, 1911. Recovered at the same place about April 29th, 1913.

32268, nestling marked as 32270 on July 9th, 1911. Recovered at the same place about April 29th, 1913.

28128, marked as 32270 on June 17th, 1913. Reported by Mr. G. Arnold at Pangbourne, Berkshire, on June 17th, 1913.

STARLING (*Sturnus v. vulgaris*).—7140, nestling marked by Mr. Smith Whiting at Hunstrete, Pensford, Somerset, on May 19th, 1910. Reported by Mr. S. Lippiatt at the same place on September 16th, 1913.

15931, adult marked by Mr. A. Bankes at Salisbury, Wiltshire, on February 28th, 1912. Recovered at the same place during May, 1913.

40844, adult marked as 15931 on September 26th, 1912. Reported by Mr. H. Fulford at the same place on May 14th, 1913.

42667, nestling marked by Mr. J. R. B. Masefield at Harewood, Cheadle, Staffordshire, on May 29th, 1913. Reported by Mr. A. Davies at Warren, near Chester, on August 13th, 1913.

GREENFINCH (*Chloris ch. chloris*).—E827, nestling marked by Mr. R. O. Blyth at Skelmorlie, Ayrshire, on August 11th, 1911. Reported by Mr. H. McIntyre at Largs, Ayrshire, on May 16th, 1913.

MEADOW-PIBIT (*Anthus pratensis*).—E790, nestling marked by Mr. R. O. and Miss A. Blyth at Portpatrick, Wigtownshire, on June 30th, 1911. Reported by Mr. J. P. Mair at the same place on May 19th, 1913.

PIED WAGTAIL (*Motacilla a. lugubris*).—21463, nestling marked by Mr. H. W. Robinson at Aldcliffe, Lancaster, on July 9th, 1912. Reported by Mr. E. Martindale at Deepcutting, Lancaster, at the end of August, 1913.

BRITISH GREAT TIT (*Parus m. newtoni*).—L127, nestling marked by Mr. C. T. Cobbold at Nursling, near Southampton, Hampshire, on May 21st, 1912. Reported by Mr. C. Green at Redbridge, near Southampton, on October 1st, 1913.

BRITISH SONG-THRUSH (*Turdus ph. clarkei*).—7077, nestling marked by Mr. A. G. Leigh at Hampton in Arden, Warwickshire, on June 2nd, 1910. Recovered at the same place on June 4th, 1913. 12107, nestling marked by Mr. N. H. Joy at Bradfield, Berkshire, on April 20th, 1911. Recovered at the same place on August 10th, 1912.

BLACKBIRD (*Turdus m. merula*).—7198, adult female marked by Mr. R. O. Blyth at Skelmorlie, Ayrshire, on August 10th, 1910. Recovered at the same place on July 26th, 1912 (see Vol. VI., p. 212), and again on August 10th, 1913. Ring replaced and bird released.

REDBREAST (*Dandalus rubecula*).—H671, adult marked by Mr. M. Portal at High Sandhoe, Hexham, Northumberland, on March 11th, 1912. Recovered at the same place on June 30th, 1913.

N164, marked by Messrs. Stanford at Aldringham, Suffolk, on September 1st, 1912. Recovered at the same place on January 3rd, 1913. Re-marked with N180 and released again.

K683, adult marked by Mr. R. O. Blyth at Skelmorlie, Ayrshire, on October 12th, 1912. Caught at the same place on July 13th, 1913. Ring replaced and bird released.

L463, marked by Mr. N. H. Joy at Bradfield, Berkshire, on January 23rd, 1913. Recovered at the same place on July 27th, 1913.

SWALLOW (*Chelidon r. rustica*).—J381, marked by Mr. J. R. B. Masfield at Cheadle, Staffordshire, on May 27th, 1912, as an adult female on nest. The male bird was sitting by the nest and was ringed with F880. Caught again on same nest on June 10th, 1913, but with a new mate. Ring replaced and bird released.

5478, adult nesting bird marked by Mr. F. W. Smalley on July 15th, 1912, at Silverdale, north Lancashire. Recovered as a nesting bird on same farm in July, and on August 19th, 1913. Reported by Mr. H. W. Robinson.

K144, nestling marked by Mr. B. Starley on August 16th, 1912, at Bubbenhall, Warwickshire. Reported by Mr. H. Barron at Princethorpe, near Rugby, Warwickshire, on June 20th, 1913. Ring replaced and bird released.

MARTIN (*Hirundo u. urbica*).—M536, nestling marked by Dr. H. J. Moon at The Fylde, Lancashire, on July 1st, 1912. Recovered at same place on June 21st, 1913. Ring replaced and bird released.

COMMON BUZZARD (*Buteo b. buteo*).—50040, nestling marked by Mr. A. Mayall at Scourie, Sutherlandshire, on June 12th, 1912. Reported by Mr. J. C. Robertson at Durness, near Cape Wrath, Sutherlandshire, on June 2nd, 1913.

COMMON HERON (*Ardea cinerea*).—50336, nestling marked by Mr. J. R. B. Masfield near Cheadle, Staffordshire, on May 31st, 1913. Reported by Mr. T. L. W. Strothen near Killinghall, Leeds, Yorkshire, on July 3rd, 1913.

MALLARD (*Anas p. platyrhynchos*).—32431, marked by Mr. A. Henderson per Mr. A. R. Haig-Brown at Shadwell Court, Thetford, Norfolk, on June 14th, 1912. This bird was hatched from a Wild Duck's egg taken from an island on the lake, and given its liberty as soon as it was old enough. Reported by M. F. Ernout near Bouchain (Nord) France, on August 4th, 1913.

31244, nestling marked by Mr. F. W. Smalley at Silverdale, north Lancashire, on July 20th, 1911. Recovered at the same place on September 1st, 1913.

8602, adult female, marked by the Hon. G. Legge at Patshull, Wolverhampton, on August 12th, 1911. Recovered at the same place on October 17th, 1913.

8636, marked as 8602 on December 30th, 1912. Recovered at same place on October 17th, 1913.

COMMON POCHARD (*Nyroca f. ferina*).—33029, adult female marked by Mr. E. de Hamel at Tamworth, Warwickshire, on February 19th, 1913. Recovered at Bützow, Mecklenburg, on August 7th, 1913. Reported in *Wild und Hund*.

TUFTED DUCK (*Nyroca fuligula*).—33479, nestling marked by Mr. W. Meech per Lord William Percy at Alnwick, Northumberland, on August 19th, 1913. Reported by Mr. M. Messenger at Irthington, Carlisle, Cumberland, on September 16th, 1913.

CORMORANT (*Phalacrocorax c. carbo*).—50678, nestling marked by Mr. R. M. Barrington on Saltee Islands, co. Wexford, on June 1st, 1913. Reported by Mr. L. L. Lehrfeld at Villa Franca de Xira, Portugal, on September 13th, 1913.

50772, marked as 50678. Reported by M. M. Chartier at Ploumanac'h (Côtes du Nord), France, on September 6th, 1913.

50649, marked as 50678. Reported by Mr. M. C. Pellow at Penzance, Cornwall, on August 10th, 1913.

100573, marked as 50678 on June 8th, 1913. Reported by Mr. H. T. Maw at Thurlestone Bay, Devonshire, on August 24th, 1913.

50641, 50393, 50640, 100563, 50717, 50676, 100557, marked as 50678, recovered from July to October, 1913, in counties Wexford, Waterford, Armagh, Westmeath, Kilkenny and Louth.

100649, nestling, marked by Miss A. Pease on the Farne Islands, Northumberland, on August 2nd, 1913. Reported by Mr. R. Bolt at Topsham, Devonshire, on October 13th, 1913.

100678, marked as 100649. Reported by Mr. A. Landsborough Thomson at Aberdour, Fifeshire on October 2nd, 1913.

100660, marked as 100649. Reported by Mr. A. Macdonald at Ferrol, Spain, on October 10th, 1913.

GANNET (*Sula bassana*).—100093, nestling, marked by Mr. J. M. Campbell on the Bass Rock on July 21st, 1913. Reported by Mr. A. P. Queen, A.B., at Queensferry, Firth of Forth, on September 6th, 1913.

100008, adult, marked as 100093 on July 24th, 1913. Reported by Mr. J. Scarth fifty miles N.E. by E. from Longstone Lighthouse, on August 26th, 1913.

100077, nestling, marked as 100093 on September 24th, 1913. Reported by Mr. G. Murray at Inverkeithing, Fifeshire, on October 9th, 1913.

STOCK-DOVE (*Columba œnas*).—9434, adult marked by Mr. C. Hyslop per Mr. H. S. Gladstone at Capenoch, Thornhill, Dumfriesshire, on January 30th, 1913. Recovered at the same place on August 22nd, 1913.

TURTLE-DOVE (*Streptopelia t. turtur*).—25674, nestling marked by Mr. J. K. Stanford at Knodishall, Suffolk, on July 17th, 1913. Reported by Mr. L. L. Lehrfeld at Villa Franca de Xira, Portugal, on September 5th, 1913.

RINGED PLOVER (*Charadrius h. hiaticula*).—13785, nestling marked by Captain W. Mackenzie at Dalmore, Ross-shire, on May 29th, 1911. Reported by Mr. W. Berry at Cromarty Firth on September 26th, 1913.

LAPWING (*Vanellus vanellus*).—17208, nestling marked by Lord Lucas near North Preston, Yorkshire, on June 6th, 1912. Reported by Mr. W. Howarth at Parr Moss, St. Helens, Lancashire, on October 1st, 1913.

40860, nestling marked by Mr. A. Bankes near Harrogate, Yorkshire, on May 30th, 1913. Reported by Mr. C. L. Capstick at Beverley, Yorkshire, on October 9th, 1913.

SNIPE (*Gallinago g. gallinago*).—14173, nestling marked by Mr. R. E. Knowles on the East Cheshire Hills on June 3rd, 1911. Reported by Mr. J. Bamforth at Slaithwaite, near Huddersfield, Yorkshire, on August 23rd, 1913.

WOODCOCK (*Scolopax rusticola*).—42029, nestling marked by Mr. J. Hitt per Mr. H. S. Gladstone at Penpont, Dumfriesshire, on May 19th, 1913. Reported by Mr. H. C. Bibby at Mayne, near Elgin, Morayshire, on September 12th, 1913.

SANDWICH TERN (*Sterna s. sandvicensis*).—45991, nestling marked by Miss A. Pease, on the Farne Islands, Northumberland, on July 9th, 1913. Reported by M. L. Cossé off Guiberou (Morbihan) France, at the end of September, 1913.

COMMON TERN (*Sterna hirundo*).—21244, nestling marked by Mr. H. W. Robinson at Ravenglass, Cumberland, on August 9th, 1911. Reported by Mr. H. T. Morris between Lancaster and Overton, on August 7th, 1913.

HERRING-GULL (*Larus a. argentatus*).—32049, nestling marked by Miss A. C. Jackson at Cromarty Firth, Ross-shire, on July 8th, 1911. Reported by Mr. A. C. Cameron at Invergordon, in July, 1912.

31706, nestling marked by Miss A. C. Jackson, near Wick, Caithness, on July 4th, 1912. Reported by Mr. W. Kelly at Passage East, co. Waterford, on July 31st, 1913.

32981, nestling marked by Miss A. C. Jackson at North Sutor, Cromarty, Ross-shire, on June 24th, 1912. Reported by Mr. Keighley Hobart between Scarborough and Filey, Yorkshire, on September 20th, 1913.

BRITISH LESSER BLACK-BACKED GULL (*Larus f. affinis*).—9974, nestling marked by Mr. H. W. Robinson at Foulshaw, Westmorland,

- on June 25th, 1913. Reported by Mr. W. C. Tait at Espouseure, north of Oporto, Portugal, about September 22nd, 1913.
- 9999, marked as 9974 on July 8th, 1913. Reported by Mr. W. C. Tait near Nazaretto, Portugal, at the end of September, 1913.
- 34029, nestling marked by Mr. F. W. Smalley at Foulshaw, Westmorland, on July 8th, 1913. Reported by M. E. Lange at Arcachon (Gironde), France, on August 23rd, 1913.
- 33048, marked as 34029 on June 25th, 1913. Reported by M. A. Conchou off the coast of Bordeaux (Gironde), France, on October 2nd, 1913.
- 34077, marked as 34029. Reported by Mr. W. Russell at Cardiff, Glamorgan, on August 30th, 1913.
- 33910, nestling marked by Miss A. Pease on the Farne Islands, Northumberland, on August 2nd, 1913. Reported by Mr. R. Honeyman at South Shields, on October 4th, 1913.
- 33922, marked as 33910. Reported by Mr. E. Tremble at Cullercoats, Northumberland, on October 8th, 1913.
- 33852, marked as 33910. Reported by Mr. A. Brown at Morpeth, Northumberland, on September 27th, 1913.
- 31613, nestling marked by Mr. T. A. Coward on Puffin Island, Anglesey, on July 1st, 1913. Reported by Mr. C. Halliwell in Morecambe Bay, Lancashire, on September 13th, 1913.



NOTES



SWALLOW RINGED IN AYRSHIRE AND RECOVERED IN THE ORANGE FREE STATE.

In August I received a letter from Mr. A. C. Theron dated from "Riet Vallei, District Lindley, O.F.S." stating that a Swallow had been captured bearing a ring with my name and address. As Mr. Theron gave neither the number of the ring nor the date of capture I asked him for these particulars and have just received his reply and the ring itself. The ring is number E937, and Mr. Theron informs me that the bird was captured at Riet Vallei on March 16th, 1913, and adds "I do not know when it arrived." This ring was placed on a nestling Swallow (*Chelidon r. rustica*) by Mr. R. O. Blyth at Skelmorlie, Ayrshire, on July 27th, 1912.

In our last volume (p. 277) an adult Swallow ringed in Staffordshire was recorded as having been captured near Utrecht, Natal, in December, and the present record is from about one hundred and fifty miles west of that place, which is not far in comparison with the total length of the journey.

In writing of the Natal record I expressed surprise that a Swallow breeding in the far west of Europe should migrate so far east in South Africa, but now that Dr. Hartert has shown (*Nov. Zool.*, Vol. XX.) by his observations in the middle of the Sahara that deserts are not necessarily a bar to the passage of migrating birds, as was formerly supposed, it may perhaps be presumed that these Swallows take a more direct line than one would previously have thought possible.

This second record, taken in conjunction with the first, is extremely valuable, and we are most grateful both to Mr. Blyth who ringed the Swallow and to Mr. Theron who reported it.

H. F. WITHERBY.

MIGRATION NOTES FROM HOLY ISLAND, NORTHUMBERLAND.—AUTUMN 1913.

In our last Volume (pp. 202-10) I gave a few notes on the results of observations made at Holy Island in September and October, 1912. This year (1913) I watched for migrants there in the same way, from August 30th to October 3rd.

I have again to express my gratitude to Mr. Morley Crossman for most kindly extending to me the same privileges

as on the previous occasion, and to Mr. W. J. Bolam for much kind help.

The total number of species and subspecies seen on, or from, the island in 1912 was one hundred and four, and this total was increased in 1913 to one hundred and eighteen. Some forty-five species were noted as passage-migrants. Immigration was proceeding on twenty-four days out of thirty-five. As last year, warblers came in very small numbers, and the greatest number of one species seen in a day was six (Willow-Warbler). On the other hand a considerable variety of species would sometimes be seen, as for instance on September 15th, when I noted immigrants of eighteen different species and found seven fresh arrivals of seven different kinds in a small copse which the day before had been empty. In point of numbers the largest immigrations occurred from September 30th to October 2nd when Finches, Goldcrests, Redwings, Robins and other birds arrived in considerable numbers. Judging by the species concerned, these latter immigrations must have been, I think, of Scandinavian origin, and on these days I noted (as on several occasions in 1912) afternoon arrivals.

The following birds are, I think, worthy of special record :—

SCARLET GROSBEAK (*Carpodacus e. erythrinus*).—On August 30th I obtained a female Scarlet Grosbeak in the copse already referred to. By dissection it appeared to be a bird of the year. On the same day there were Redstarts, Pied Flycatcher, Tree-Pipits, Willow-Warblers and Long-eared Owls, but as this was my first day in the island I cannot say when they arrived. There had been a fog the day before.

On September 15th I saw a finch which, by its “dirty” coloured double wing-bar and streaked throat and breast, appeared to be another example like the one I obtained on August 30th; but it was very wild, and would not let me approach nearer than some eighty yards. The next day I got two very good views of it at about the same distance, and had ample time to note, with the help of my binoculars, its characteristics more clearly—the streaked throat and breast, double buffish wing-bar, brown upper-parts, and more slender shape than other finches or buntings of the size, being well marked.

CONTINENTAL GOLDEN-CRESTED WREN (*Regulus r. regulus*) (see Vol. VI., p. 204).—A large immigration of Goldcrests took place on September 30th and October 1st, and the specimens examined were of the Continental form.

BARRED WARBLER (*Sylvia n. nisoria*).—Of this species I saw no less than nine examples—three appearing on September 2nd, four on the 15th, one on the 19th, and one on the 25th. When it is borne in mind that the greatest number of individuals of any warbler seen during my stay was sixteen, this number of Barred Warblers is certainly remarkable, and since Holy Island is not a point of concentration like Spurn or Blakeney, nor an isolated “haven of refuge” like Fair Isle or Heligoland, one may presume that large numbers of Barred Warblers must have landed this autumn on our east coast. All the birds I saw had very little barring (some only the faintest indications of bars) and were no doubt birds of the year. Most of them were remarkably tame, and could be watched for a long time within a few yards without their moving, others were however decidedly wild. They flew strongly and straight, and they looked large and long-tailed and pale coloured, and could not be confused easily with any other warbler except perhaps the Orphean which has, however, in my recollection a considerably darker appearance on the back and rump.

LESSER WHITETHROAT (*Sylvia c. curruca*). (See Vol. VI., p. 208).—This species was noted, as in 1912, on a number of occasions, and must now be regarded as a regular autumn migrant to the Northumberland coast. It was observed on fourteen days in September and at least ten different individuals were seen.

CONTINENTAL REDBREAST (*Dandalus r. rubecula*). (See Vol. VI., p. 210).—One was seen on September 23rd, eight on the 30th, four on October 1st, and four on the morning of October 2nd, but in the afternoon of that day there was a considerable influx, no fewer than twenty-five being counted, while on the following morning (October 3rd) there were only five left. The few resident Redbreasts much resented the invasion of twenty-five, and it was most amusing to watch the bewildered attempts of a dark-coloured resident to chase five or six of his pale-coloured *confrères* from his own particular hedge.

H. F. WITHERBY.

LARGE CLUTCHES OF GOLDFINCH'S EGGS.

EARLY in August, 1911, I found, at St. Briavels, Gloucestershire, the nest of a Goldfinch (*Carduelis c. britannica*) in a fork of a pear tree, which contained the unusually large number of six young birds as well as an addled egg. On June 28th of this year (1913) I found a similar nest, placed in the same fork. This nest contained six eggs, all quite

fresh. With these two exceptions, none of the nests which I have examined in this part of Gloucestershire contained more than five eggs and many of them held only four.

CECIL MARTIN.

[Although clutches of six eggs are not uncommon in this species, it is very rarely that this number is exceeded. An instance of seven eggs being found in a nest in Somerset is recorded by Mr. S. Lewis, in the *Zoologist* 1906, p. 316.—F.C.R.J.]

YELLOW-BREASTED BUNTING IN NORFOLK.

At Cley on September 4th, 1913, the wind being in the north-east, I secured by some extraordinary chance another specimen of the Yellow-breasted Bunting (*Emberiza aureola*) which I added to the British list on September 21st, 1905. The most prominent feature of this bird in the field is the very marked eye-stripe. It has also much white in the tail.

E. C. ARNOLD.

TREE-PIPIT AND PIED FLYCATCHER IN IRELAND.

ON September 3rd, 1913, Mr. F. J. Duffy, Lightkeeper at Rockabill, co. Dublin, found two birds dead at the base of the tower. Both were forwarded to me in the flesh, one proved to be a female Tree-Pipit (*Anthus t. trivialis*) in fair condition, the other a young Pied Flycatcher (*Muscicapa h. hypoleuca*).

Prof. Patten has already recorded (*Irish Nat.*, 1912, p. 209) the Tree-Pipit from the Tuskar Rock, co. Wexford, one obtained on September 10th, the other on September 22nd, being the first authentic occurrences in Ireland. Prof. Patten suggests that it was emigrating from Ireland, and that Irish ornithologists should use every effort to prove that it breeds there. This species has been met with in some numbers by Mr. Eagle Clarke in St. Kilda, in the autumn, and is a great straggler, and the fact of its occurrence in September at the Irish Light stations does not necessarily prove that it breeds in Ireland or was emigrating, any more than the Pied Flycatcher which was picked up dead at the same time, being the eleventh autumnal specimen of this species forwarded to me from Irish Lighthouses since 1886.

RICHARD M. BARRINGTON.

GREY WAGTAIL BREEDING IN HAMPSHIRE.

A GREY WAGTAIL (*Motacilla b. boarula*) built this spring in a hole, where a broken brick had been displaced, in the wall of the Manor House at Buriton, Hants. Unfortunately

it did not hatch off. I am very well acquainted with the bird in Lancashire.

A. W. MARRIAGE.

[About nine instances of breeding are given in Messrs. Kelsall and Munn's *Birds of Hampshire*.—EDS.].

WILLOW-TIT BREEDING IN ESSEX.

Two nests of the Willow-Tit (*Parus a. kleinschmidti*) were found in the neighbourhood of Felsted in 1912 and 1913. The first was in a pollarded willow near the school, about four feet from the ground. The hole resembled an old Woodpecker's boring, but the entrance was only wide enough to admit two fingers, though the nest cavity was about the size of a man's fist. There were no chips beneath the hole, which had probably been made the preceding year, as it contained two nests, the lower one having in it three addled eggs. The nests consisted of fine hair, chips, and slightly coarser hair, but there was not much material in all. Unfortunately the boy who found it broke all but five of the eggs in getting them out. On May 12th, 1913, another similar nest with seven fresh eggs was found in an elm just below where the top had been blown off, about nine feet from the ground. The materials used in this case were similar to those in the first nest, and in neither case was any moss used. A wet ditch was immediately below the hole, and I noticed no chips. I was present at the finding of both nests.

J. H. OWEN.

ON THE NESTLINGS OF THE GOLDCREST.

DURING the last three years I have had the opportunity of keeping under observation several nests of the Goldcrest (*Regulus r. anglorum*), especially a nest in my garden only four feet from the ground. It appears that the nestlings, as soon as they are partly fledged, take up a constant and unusual position in the nest. They all lie in a circle, looking outwards, the tip of the beak being on a level with the top of the nest. They cling tightly to the side, which bulges somewhat in the centre, so that their position is more vertical than horizontal. For this reason it is difficult to see the nestlings, as they are hidden by the edge of the nest, the difficulty being increased by the fact that the feathers of the lining soon work up and bend over the entrance. Later, if there are more than five young, one often fails to find room at the side, and sits on the backs and tails of the others, in the centre of the nest. They leave the nest on about the twenty-first day.

NORMAN H. JOY.

BARRED WARBLER IN NORFOLK.

ON September 2nd, 1913, at Cley I shot an immature Barred Warbler (*Sylvia nisoria*) which appeared much darker on the wing than any I have seen before. Its flight was very like that of a Red-backed Shrike. Wind north-east.

E. C. ARNOLD.

[We believe that another Barred Warbler was obtained in the same locality in September.—EDS.]

RUFIOUS WARBLER IN SUSSEX.

ON September 21st, 1913, I was shown a small bird that had been shot the previous day at Brede, Sussex, and came to the conclusion that it was a worn example of an adult Rufous Warbler. It proved, upon dissection, to be a male. As this is a rather difficult bird to identify without any skins for comparison, I forwarded the specimen as soon as it was set up to Mr. Witherby to compare and confirm.

H. W. FORD-LINDSAY.

[I have carefully compared the specimen referred to, and it is clearly an example of the typical form of the Rufous Warbler (*Agrobates g. galactotes*).—H.F.W.]

NUMBERS OF YOUNG IN BROODS OF
SWALLOWS IN 1913.

HAVING given the numbers of young in broods of Swallows near Lancaster for several years (*cf.* Vol. IV., p. 249, Vol. V., p. 135, Vol. VI., p. 254), the following particulars relating to 1913 may be of interest. During June I did not examine any nests. In July no broods of six were seen, 28.5 per cent. contained five young, 14.2 per cent. had four, 42.9 per cent. had three young, and 14.2 per cent. only two. During August no full broods of six occurred, and only 7.7 per cent. had five young, whilst 30.7 per cent. contained four and 38.5 per cent. three young, 15.3 per cent. having two, and 7.7 per cent. only one. Two nests visited in September contained three apiece.

		Nests.	Broods of Six.	Broods of Five.	Average Broods.	
1913	...	22	None	3	13.6%	3.27
1912	...	20	„	8	40%	3.95
1911	...	60	3	24	45%	4.4
1910	...	45	None	15	33%	3.89
1909	...	11	„	0	0%	3.27

H. W. ROBINSON.

COMMON SCOTERS IN SUMMER IN CHESHIRE.

IN reference to Mr. T. A. Coward's note (*supra*, p. 118), since I saw the two Common Scoters (*Oidemia n. nigra*) he mentions on July 31st, on Marbury Mere, near Northwich, Cheshire, I have twice seen single male birds on the same water—once on August 22nd and again on September 9th. I also saw a drake Scoter on August 17th at Oakmere, Delamere, about seven miles distant from Marbury.

J. MOORE.

LATE NESTING OF THE LITTLE GREBE.

WITH reference to the Rev. F. C. R. Jourdain's remarks (*supra*, p. 146) on this subject, I have had similar experiences this year, and consider it by no means uncommon for the Dabchick to have fresh eggs at the beginning of August. On August 2nd, I found a nest containing two eggs, and on September 23rd I saw a downy young one (not more than a week old) being fed by its mother. In this latter case, allowing for about twenty-one days' incubation, the eggs must have been laid at the beginning of September, or, at the earliest, at the end of August. I might add that in my experience the majority of these late nests contain incomplete clutches, whether the birds have been disturbed or not.

GEORGE BAYNES.

ON September 4th, 1913, I was watching an adult Little Grebe feeding two young ones on a pool near Manchester. The young ones were about half grown, and I judged them to be about a fortnight old. Again on October 5th, 1913, I watched another Little Grebe feeding two young ones on a pool near Oldham. These were about three-quarters the size of the parent, and would probably be not more than a month old. Both these broods being near thickly-populated districts, and especially in the second case where pleasure-boats are being constantly used, the birds are much disturbed during their nesting period.

T. ROBINSON.

LITTLE GREBE USING SAME NEST
TWICE IN SUCCESSION.

ON June 2nd, 1913, I was engaged in photographing a pair of Little Grebes (*Colymbus r. ruficollis*) at a nest which then contained one young bird and four unhatched eggs. I visited the birds again on June 7th on which date there remained a single infertile egg in the nest, and this I removed. On June 12th the structure had been repaired and contained

one fresh egg, despite the fact that in order to obtain successful photographs I had previously cleared away all the rushes and weeds in front of the nest, so that it was much exposed to view.

HOWARD BENTHAM.

GREEN SANDPIPER IN ORKNEY.

LAST year I was able to record the occurrence of two Green Sandpipers (*Tringa ocropus*) in Orkney (Vol. VI., p. 315). This year (1913), on August 7th, my friend Mr. T. P. Aldworth saw a single bird which got up out of a ditch at Evie.

JAMES R. HALE.

STILTS IN KENT.

Two specimens of the Black-winged Stilt (*Himantopus himantopus*) have been recently obtained at Lydd, Kent. One, a female, was shot on September 15th, 1913, and the other, a male, on September 20th. I saw both birds soon after they were shot, and they were birds of the year, the legs were brownish, not having assumed the red colouring of the adult birds.

H. W. FORD-LINDSAY.

LITTLE AUK IN AUGUST IN IRELAND.

ON August 30th, 1913, a Little Auk (*Alle alle*) was killed at Aranmore Light station, co. Donegal, being the first occasion on which this species has struck a lantern. It was received by me in a decomposed condition and unfit for preservation. On the same date, the Chief Inspector of Fisheries (Mr. W. S. Greene) saw a Little Auk on the Kenmare River. It looked, he says, "a little out of sorts."

Mr. Ussher has tabulated the monthly occurrences of the Little Auk (*Birds of Ireland*, p. 368) and there are no records for June, July, August, or September.

RICHARD M. BARRINGTON.

DEATH OF MR. R. J. USSHER.

WE deeply regret to announce that Mr. R. J. Ussher, the well known Irish ornithologist, died on October 12th.

Mr. Ussher's place in Irish ornithology will indeed be difficult to fill. A notice of his life and work is kindly promised for our next number by Mr. R. M. Barrington.

BREEDING OF THE NUTCRACKER IN DENMARK.—In the *Dansk Ornithologisk Forenings Tidsskrift*, Vol. VII., p. 165, P. Jespersen states that the Nutcracker (*Nucifraga c. caryocatactes*) was discovered breeding in north-west Sjaelland in 1912. Four young were reared in Kongdal Skov near

Mörköv. Hofjaegermester Estrup, who made the discovery, noticed the birds haunting the wood, but did not find the nest till the young ones were fledged, at the end of June. This is a considerable westward extension of the breeding range of this species, which has previously been recorded as breeding on Bornholm.

TREE-SPARROW NESTING IN CO. DONEGAL.—Mr. C. V. Stoney writes (*Irish Nat.*, 1913, p. 163) that he has discovered another breeding colony of *Passer montanus* in co. Donegal besides those already known. This colony consists of some twelve or more pairs nesting in company with House-Sparrows in a small fishing village on the north-west coast.

RING-OUZEL AS FOSTER-PARENT OF CUCKOO.—In the *Scottish Naturalist*, 1913, p. 233, Mr. C. Kirk states that he observed a Ring-Ouzel (*Turdus t. torquatus*) feeding a fully-fledged young Cuckoo at Kilchoan, Loch Melfort, on July 11th, 1913, at about 500 ft. above sea level. The recorded instances in which the Ring-Ouzel has acted as fosterer are very few: Bidwell quotes R. Small and A. Hogg; Wells Bladen also mentions an instance in the *Rep. North Staffs. Field Club*, 1895-6, p. 24. The issue of *Country Life* for July 5th, 1913, contains a photograph of a Ring Ouzel's nest containing a Cuckoo's egg, found on June 10th, 1913, at Airedale, but the note is unfortunately only authenticated by the initials of the writer (J. H. P.). Mr. E. P. Butterfield, writing in the *Zoologist* 1913, p. 391, states that a Cuckoo's egg was recently found in a Ring-Ouzel's nest on the moor above Bingley, probably a reference to the Airedale occurrence noted above. Mr. Butterfield adds that over twenty years ago his sons found a Cuckoo's egg in a Ring-Ouzel's nest on Harden Moor.

FURTHER SPREAD OF THE FULMAR IN IRELAND.—Following Mr. Barrington's news of the breeding of *Fulmarus g. glacialis* in co. Kerry (*antea*, p. 56), Mr. R. J. Ussher announces that on visiting Tory Island (co. Donegal) on July 1st, 1913, he found two pairs of Fulmars sitting, and others circling close by. An islander stated that the birds had appeared a month and a half previously. This is the second colony in Donegal. A second colony for Mayo has also been discovered on a precipitous island not far from the great cliff where Mr. Ussher first saw Fulmars breeding in July, 1911. There are thus five breeding colonies now known in Ireland.

WHITE OYSTERCATCHER.—Mr. John A. Dockray writes that a white specimen of the Oystercatcher (*Haematopus ostralegus*)

was shot in the Dee estuary opposite Parkgate on October 6th, 1913. With the exception of the shoulders, which showed a slight duskiness, the bird was perfectly white; the legs and bill were the normal colour. The bird appeared to be an adult.

DIURNAL MIGRATION AT THE TUSKAR ROCK.—In the *Zoologist* 1913, pp. 182-195, 212-228, Professor C. J. Patten has a long and important paper on diurnal movements of certain species as observed by him at the Tuskar Rock, off co. Wexford, during the autumns of 1911 and 1912. He points out that the Tuskar would be an important migration observatory were there no lighthouse on it, and that a study of diurnal movements there is even more important than of nocturnal ones, since the study of the latter at the lantern of a lighthouse is in most cases a study of distorted migration, and the large assemblies of many species that sometimes occur are probably artificially produced by climatic conditions aided by the lure of the light.

During the latter part of August and September of 1912 he made a special study of the daylight movements of Pipits, Wagtails, and Swallows. Wagtails began to pass some days before August 25th, the first Meadow-Pipit appeared on the 28th, but the passage was not regular until September 1st; odd Swallows passed at intervals before August 30th, but the passage did not set in regularly until that date. The daily flight of Wagtails and Pipits began with great regularity at dawn and that of Swallows an hour or two later, and lasted for fully five hours and even longer. The numbers passing were markedly less on rough and windy days, especially when these conditions were persistent over a period. About five per cent. of the Wagtails and Pipits halted on the rock, the proportion being larger on warm and calm and on rough and windy days than on those with intermediate or uncertain types of weather. Of the Wagtails, the Yellow Wagtail formed only a very small proportion, and excluding these, the White and Pied formed two-thirds of the whole and the Grey one-third; of thirteen White and Pied Wagtails obtained, eleven proved to be White and only two Pied. The Pipits were nearly all Meadow-Pipits, a few Rock-Pipits appearing towards the end of September. All these frequently uttered their call-notes while passing, and their average height of flight, as judged by the height of the lighthouse tower, was: Meadow-Pipits 70 ft., Wagtails 120 ft. (with considerable variations), and their speed was estimated

at about 20 miles per hour. The Swallows swept by fairly low (about 40 ft.) and rapidly, their speed being certainly up to 100 miles per hour. Alighting was quite exceptional. Normally the migrating parties were small, but stretched to some distance on either side of the rock. The chain-like character of the migration is especially emphasized, the links being formed of these small parties and even by solitary individuals and is likened to a broad procession, loosely and unevenly marshalled. Larger communities were only observed as the result of a damming back of the stream by such conditions as fogs, dense haze and drizzle, strong head-wind, etc., etc., and Professor Patten concludes that this chain-like procession is the normal character of both diurnal and nocturnal movements and so-called "rushes" are abnormal and largely artificial.

The direction taken by these migrants was during September and the first week of October, 1911, almost invariably between north and west (usually north-west), i.e., towards the Irish coast. In 1912 the direction was the same up till the latter part of September, when it changed to south-east, i.e., seawards. In the two former cases the wind was chiefly north-west, and in the latter east and south-east, but Professor Patten leaves the question as to whether the wind was a determining factor in the direction taken an open one. He considers that it is probable in the case of the Swallows that these were quasi-immigrants to Ireland derived from a stream coasting south down Cardigan Bay and, owing to the continuous westward trend of the coast and having overshot their mark, they almost immediately sighted the coast of Ireland and made for it (*cf. Irish Nat.* 1912, pp. 65 and 143). He finally concludes that all these species pass the Tuskar almost entirely by day and that nocturnal movements are quite exceptional.

The other species seen passing this station by day as well as by night include Chaffinches, Greenfinches, and Linnets (the latter apparently more by day than by night), Wheatears, Willow-Warblers, Chiffchaffs, and Spotted Flycatchers.



LETTERS



DO ROOKS OCCASIONALLY BREED IN THEIR FIRST YEAR ?

To the Editors of BRITISH BIRDS.

SIRS,—Having paid some attention to the manner in which the face of the Rook becomes bare, I may state that in the main my observations and specimens confirm Mr. Witherby's conclusions. But, with regard to this species not breeding in the first year, there is evidence that this is not invariably the case. I dissected the bird referred to in Vol. IV., p. 370, as "undoubtedly breeding," and it contained an egg nearly ready for extrusion.

Again, in the *Zoologist* for 1888, p. 224, it is recorded that a black-beaked Rook was seen repeatedly carrying sticks and endeavouring to build, but apparently unsuccessfully. Stevenson also, in the *Birds of Norfolk*, notes that out of six Rooks killed in the act of collecting sticks for nesting purposes, all of which proved to be males, "one exhibited a pure black face, with stout bristles, like young birds in their first summer."

ERIC B. DUNLOP.

TROUTBECK, WINDERMERE.

[The mere act of carrying about nesting-material does not of course prove that the birds were capable of breeding, but it perhaps shows that they had some desire to do so, and the comparative sizes of the organs of the males which I gave on page 131 might I think account for such a desire.—H.F.W.]

DIMINUTION OF STARLINGS IN YORKSHIRE.

To the Editors of BRITISH BIRDS.

SIRS,—I do not see any reference in your correspondence columns to the extraordinary diminution in the numbers of breeding Starlings in 1913, which in the East and West Ridings of Yorkshire has been most marked. Not a tenth of the usual number of nests have been occupied, and the birds were gathered into flocks by the third week in May, when they should have been busy feeding young. No reason for this extraordinary diminution in reproductive powers of a bird which up to now has far exceeded the available supply of nesting-sites has been discovered.

E. W. WADE.

NORTH FERRIBY, EAST YORKS., *September 28th, 1913.*

PROBABLE SCARLET GROSBEAK IN HAMPSHIRE.

To the Editors of BRITISH BIRDS.

SIRS,—On August 13th, at this place (which is about two miles inland from the Solent), I was startled at seeing a very brilliant scarlet bird perching on a stem where there was a tangled mass of wild-flowers and a hedge. I was able to get close to it with field-glasses. It was certainly of the family Fringillidæ, about the size of a Bullfinch, but of a more slender shape; it was scarlet in varying intensity on head, breast, and rump; wings and tail dark brown to dark brownish-grey; the wing-coverts tipped with buff, making a dull bar across the wing. I thought there was some black through the eye, but it may have been the shadow. It uttered a sort of song, several quick notes in succession. On coming home and looking it up in Saunders's *Manual*, I could find no bird to answer to the description except the male Scarlet Grosbeak (*Carpodacus erythrinus*) which exactly fitted it, including the song.

KATHERINE SPEAR SMITH.

TITCHFIELD, HANTS, August 17th, 1913.

THE SPARROW OF RATHLIN ISLAND.

To the Editors of BRITISH BIRDS.

SIRS,—In his article on the occurrence of the Tree-Sparrow in Inishtrahull, Professor Patten suggests (*antea*, p. 49) that observations should be made on the Sparrows of the neighbouring islands, including Rathlin, with a view to discovering whether this bird is to be found there also. We were recently in the latter island and inspected the Sparrows carefully, with the result that we did not observe a single Tree-Sparrow either round the crofts or feeding with mixed flocks of House-Sparrows and other finches in the barley-fields, and we could get no information as to this species from the country-people or lightkeepers. The House-Sparrow is tolerably abundant, although rather local, its distribution depending mainly on the presence of thatched roofs. Many of the newer cottages are slated, and unless there are any bushes near, these are free from Sparrows. For the same reason probably there are no Sparrows on the lighthouse buildings on the east side of the island, although they are abundant round some of the old thatched cabins half a mile away.

MARY G. S. BEST.

October 11th, 1913.

MAUD D. HAVILAND.

THE MATERNAL INSTINCT OF DUCKS.

To the Editors of BRITISH BIRDS.

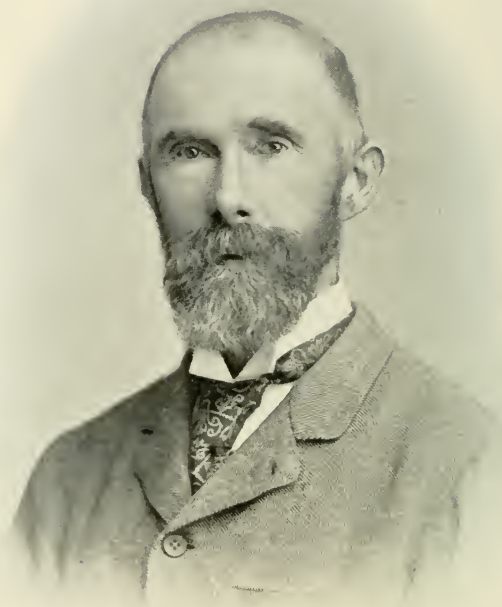
SIRS,—Mr. E. W. Hendy, in the August issue (*antea*, p. 92), notes the case of an apparently sterile female Tufted Duck wishing to share the duties of motherhood with a bird of the same species which had eleven ducklings.

In another member of the Anatidæ, the Common Eider (*Somateria m. mollissima*), I have observed a similar desire very markedly evinced. In the locality where these observations were made, many eggs of this species are taken by the inhabitants for cooking purposes, and, as the larger gulls are very numerous indeed, no doubt great numbers of eggs and young are appropriated by them. Apparently as a result of being thus deprived of their eggs and young, though probably some are non-breeders, many ducks are to be seen without progeny.

On the sea I saw as many as twenty Eider Ducks accompanying four ducklings, and on another occasion ten Ducks with three young. On land I saw on one occasion a number of female Eiders standing together, on going towards them nine rose and flew off, and then one more which had a single duckling. Later the same day, I saw five standing together, on going to the place I found another duck sitting on three newly-hatched young which were still in the nest. In another instance two Eider Ducks were noted standing within a few feet of a bird covering three newly-hatched young, in the nest. Also an Eider was seen standing beside one that was incubating four eggs, and another by a bird that was sitting on a single egg.

ERIC B. DUNLOP.

TROUTBECK, WINDERMERE.



B.B., Vol. VII , Pl. 16.

Richard J Limber

Born April, 1841. Died October 12th, 1913.

(From a photograph taken about 1900.)

BRITISH BIRDS

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ASSISTED BY

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RICHARD JOHN USSHER, D.L., M.R.I.A.

A MEMOIR.

BY

RICHARD M. BARRINGTON.

(PLATE 16.)

A TRUE conception of the position Mr. R. J. Ussher occupied amongst Irish Naturalists, cannot be readily conveyed. Amongst Irish ornithologists he was *facile princeps*, the "Recording Angel," and had at his finger-ends all the records of the distribution, county by county, of the Irish avifauna.

As a spelilogist, he also took first place—and certainly no Irishman, and very few Englishmen, have spent the same amount of time and money in excavating caves.

He was born in April, 1841, and died after a short illness on the 12th October, 1913, aged 72 years, and was buried in the family vault at Whitechurch, near his residence, on October 15th. His father, who married a daughter of Colonel Grant, at one time Governor of Upper Canada, was 63 years old at the time of R. J. Ussher's birth, so that the two lives extended over a period of 135 years. At the age of 12 he was sent to a school at Portarlinton, and subsequently to Chester, and afterwards, being delicate, he was educated by a tutor, and entered Trinity College, Dublin, as a non-resident, but owing to ill-health, never took his degree, but passed successive winters travelling with his mother and a tutor in Spain, Italy, Corfu, etc.

When twenty-five, he married the eldest daughter of the Rev. John Finlay, of Corkagh House, co. Dublin, and again travelled abroad for some years. He then devoted himself with energy to public duties in his own county, and became Deputy-Lieutenant, Grand Juror, and High Sheriff, and taking a great interest in Church matters was for many years a member of the General Synod.

His interest in Natural History was partly inherent, for as a boy he was fond of egg-collecting, and this taste was developed chiefly owing to the circumstances of his life, for in 1877 his wife became a confirmed invalid, and under this great family sorrow, relief was

sought in his early love for ornithology. His summers were spent at Ardmore, on the coast of Waterford, where the cliffs and seabirds were a constant source of attraction, and Ussher became an expert climber and a great egg-collector.

Almost every part of Ireland was visited in ceaseless search for the breeding-haunts of rare birds, and the assistance of correspondents was enlisted in nearly every county, so that his egg-collection became almost unique, and was acquired some years ago by the National Museum in Dublin. After its removal from Cappagh, he gave up egg-collecting, but his energy as an ornithologist was even greater than before. Annual summer journeys, not only to the cliffs and islands of the west coast but also to the lakes and marshes of the midlands, were undertaken.

Students of ornithology in Ireland have been singularly few compared with Great Britain, and from the time of William Thompson, 1849-51, down to 1900, with the exception of A. G. More's valuable *List of Irish Birds* (1885 and 1890), one was at a loss to know where to seek for information. Papers and notes were scattered everywhere, and the contents of private museums were practically unknown. Ussher, after immense labour and correspondence, tabulated and extracted everything he considered of value. Possessing leisure, enthusiasm and knowledge, and being a persistent and unwearying letter-writer, he collected material from all sources with astonishing assiduity, and we have the result in the well-known *Birds of Ireland*, a volume which will hold its own with any of a similar kind for painstaking and original work. It is not merely a topographical ornithology: it also contains descriptive notes on the habits of birds—some quite new, and almost all simply and happily expressed.

If Ussher had any fault, it was being over-patient with correspondents, whose feelings he would avoid hurting by any show of incredulity. He delighted to encourage poor men by presenting them with books and pamphlets on Natural History, and for their benefit he wrote long letters of explanation.

Since the *Birds of Ireland*, perhaps the most laborious work he undertook was revising More's *List of Irish Birds* for the National Museum, and writing Part XX. (Aves) for the Clare Island Survey. A list of his more important ornithological papers is given at the end of this memoir.

He was fond of archæology, and it was Prof. Leith-Adams who chiefly aroused his interest in cave-digging. Ussher published with him, and in conjunction with others, many papers on cave-exploration. The brunt of the labour and a large share of the expense were always borne by him. He thoroughly enjoyed working underground, and he provided himself with a complete digging equipment. So far back as 1879, a paper appears in the *Zoologist* under his name on a cavern near Cappagh, and he explored with Leith-Adams the Shandon Cave, and the limestone cave on his own property at Ballynahemery, and after Prof. Adams's death, the Keshcoran Cave in Sligo, the Edenvale Cave in Clare, and the Castle Pook Cave near Doneraile.

He was always accompanied by his faithful valet, John Power, and usually erected a hut at the mouth of the cave, spending weeks laying bare the bones of mammoths, bear, red deer, hyænas, lemmings, etc., The hyæna and three of the lemmings he was the first to discover in Ireland. Thousands of bones and many interesting pre-historic human relics have been deposited in the National Museum, Dublin ; its Curator, Dr. Scharff, rendering valuable assistance in their identification. The writer well remembers a visit paid to Castle Pook ; when shown into his "room" (one side of the hut) the huge shoulder-blade of a mammoth, just exhumed, was found laid out on the bed.

Nothing, however, pleased Ussher more than the finding of the remains of the Great Auk in co. Waterford and other localities, and at the time of his death he was preparing a further report on cave-exploration.

Though by no means a rich man, he gave a few years ago a sum of £300 to the Royal Irish Academy to promote the study of Zoology in Ireland, including researches in Irish caves, and he bequeathed to the same body all his manuscripts, books, schedules, notes

and papers on Natural History, cave-exploration and antiquities, and the hut in which he resided when engaged in cave-work. Mr. C. B. Moffatt, Dr. R. F. Scharff, and the writer of this memoir he recommended for the administration of the above.

In appearance he was a fairly big man, almost six feet high, well set-up, with reddish hair and beard. He had a rugged, but good-natured face, kindly blue eyes, and a quiet, courteous manner. He was anxious about detail, fond of children, and ready to explain with great minuteness. He was gentle, yet resolute, and if sometimes inclined to be credulous, this failing was best overcome by the good-natured jokes of those who knew him well.

It has been truly said that "his integrity, unfailing courtesy and strong desire to be fair to those with whom he might differ, were bound in the end to win him approval, or at least, respect."

SOME OF R. J. USSHER'S MORE IMPORTANT CONTRIBUTIONS TO ORNITHOLOGY.

- 1883. "The Siskin in Ireland." *Zool.* (3), VII., p. 493.
- 1884. "Irish Breeding-stations of the Gannet." *ib.*, VIII., p. 479.
- 1886. "Bird Life on the Saltees and the Keraghs." *ib.*, X., p. 88.
- 1889-91. "The Invasion of Crossbills in the East of France." *ib.*, XIII., p. 70. "Crossbill Breeding in Co. Waterford." *t.c.*, p. 180; XV., pp. 199, 311.
- 1892. "The Crossbill in Ireland." *Irish Nat.*, I., pp. 6, 28.
- 1893. "The Breeding of the Garden Warbler in the Shannon Valley." *ib.*, II., p. 185.
- 1894. "Report on the Breeding Range of Birds in Ireland." *Proc. R.I. Acad.*, XIX., p. 401.
- 1894. "The Birds of the Co. Cork." Cork.
- 1895. "An Ornithological Exploration in Donegal, Fermanagh, Sligo, and Roscommon." *Irish Nat.*, IV., p. 142.
- 1896. "The Birds of Connemara." *ib.*, V., p. 319.
- 1897. "The Distribution of Birds Breeding in Ireland." *ib.*, VI., p. 64.
- 1900. (with R. Warren) THE BIRDS OF IRELAND.
- 1901. "The Great and Sooty Shearwaters on the South Coast." *Irish Nat.*, X., p. 42. "The Colours of Guillemots' Eggs." *Nature*, LXV., p. 5.
- 1902. "The Bird-Fauna of Ireland as affected by its Geography." *Brit. Assoc. Report*, p. 658.
- 1904. "Birds met with in the Shannon Valley." *Irish N.*, XIII., p. 101.
- 1905. "Birds met with on the Connaught Lakes." *ib.*, XIV., p. 125.
- 1908. "A List of Irish Birds." Dublin (National Museum).
- 1910. "Birds of Rosepenna." *Irish Nat.*, XIX., p. 170.
- 1911. "The Fulmar Petrel breeding in Ireland." *ib.*, XX., p. 148.
- 1912. "Clare Island Survey." *Aves. Proc. R.I. Acad.*, XXXI., pt. 20.

BREEDING OF THE ROSEATE TERN IN IRELAND.

BY

GEORGE R. HUMPHREYS.

FOR a considerable number of years the Roseate Tern (*Sterna dougalli*) has been excluded from the list of Irish breeding birds. The late Mr. Ussher, in his report on the birds of Clare Island (*Proc. R. Irish Acad.*, Vol. XXXI., part 20, page 39), stated that the Roseate Tern had been rarely met with in Ireland for the last fifty years, but referred to a specimen shot in Clew Bay on the 3rd August, 1904, which would rather lead one to suppose that the species was breeding in Ireland at that time. The only other specimen I can find recorded is a male which was killed by striking Hook Tower Lighthouse, co. Wexford, on the 30th April, 1897. This bird is in Mr. Barrington's collection, having been sent him in the flesh.*

It gives me much satisfaction to be in a position to put on record the nesting of the Roseate Tern in Ireland this year (1913). Unfortunately the time at my disposal was very limited, and my observations were confined to two visits to the colony, both of short duration.

During the third week in July, while visiting a breeding-colony of Common and Arctic Terns, I was attracted, almost immediately on my arrival, by the alarm-note of a tern which was flying around with the commoner species. This note was a harsh "crake," and quite different from the note of any tern I had previously heard. The bird kept uttering its harsh note the whole time it was flying overhead, and consequently I had not much difficulty in picking it out, when I at once noticed it had a decidedly lighter coloured plumage than the rest, and appeared of a more slender build. By the aid of a pair of prism glasses I examined it more closely, and now noticed the apparently black beak. Although the

* *Birds of Ireland*, Ussher and Warren, p, 319.

inclination was to put the bird down, there and then, as a Roseate Tern, I was not quite satisfied that the beak was black, owing to the poor light due to an overcast sky. In a short time, when the clouds had lifted and the sun shone out I returned to the spot. The bird was again flying about, uttering its harsh "crake." Lying down on the ground, I waited for it to come within close range of the glasses. In a few minutes I was rewarded with a clear view of the bird as it flew past, and was able to satisfy myself that the beak was quite black except for a small portion at the base, which was orange-red. I now noticed distinct white lines extending down the primaries while the wings were expanded. During the whole time the tern was in the air it kept watching me very closely, and a peculiar twisting movement of the head attracted my attention. In about ten minutes the tern alighted on the ground within a few yards, when I saw that the tail-feathers extended well beyond the tips of the wings. I was perfectly satisfied now that this was a Roseate Tern, notwithstanding the fact that the rose-pink of the breast appeared to be absent. While watching this Tern I distinctly heard two others uttering a similar harsh "crake" as they flew around.

Soon after alighting, the Tern ran a short distance and was lost sight of. Creeping up quietly I had the pleasure of seeing it rise off an egg. On comparing this egg with those of the Common and Arctic Terns, I found it was of the distinct elongated type ascribed to the Roseate Tern, but remarked nothing peculiar as regards the colouring.

Two days after the discovery another visit was paid to the colony. I was now surprised to find a considerable number of Roseate Terns. After going over the ground carefully I came to the conclusion that there were about eighty Roseates in the colony, the great majority of them displaying the rose-pink on the under-parts. One bird exhibited a much larger portion of orange-red on its

beak than any of the others. I examined from twenty to twenty-five undoubted nests of this rare species. These were spread over five different sites, each accommodating a nesting-colony of Roseate Terns only. The largest number of nests in any one of these colonies was seven. The only exception to the foregoing was that of the Tern recorded on my first visit. This bird had its nest nearer the edge of the general colony than any of the other Roseates, and amongst the nests of the Common and Arctic Terns. Out of the total number of nests examined one contained two eggs; one a nestling and an egg just chipping; two or three single nestlings; and the remainder one egg each. In practically every instance where there were eggs, incubation was well advanced. It will be seen from this that the tendency was to hatch out one egg, although the full clutch is stated to consist of two eggs (*British Bird Book*, III., p. 66). It was also apparent that the Roseates were later breeders than the other species. I have mentioned "nests," but really no nesting-material was used by any of the birds.

As regards the colour of the eggs, there was little, if any, marked variation, the ground-colour being light stone, spotted, and speckled with shades of brown, with underlying blotches or spots of ashy-grey. Although in most cases the eggs were more elongated than those of the Common and Arctic Terns, it was difficult to find very much difference in some.

With regard to the nestlings, these were *quite distinct* from the nestlings of any of the other species. In the first place the upper-parts were streaked with dark on a buff ground-colour, whereas the dark markings on the nestlings of the Common and Arctic Terns are in the shape of blotches, and are not so freely distributed over the surface. There is, however, another most important distinguishing feature, namely the colour of the legs and feet; these were of a dark purplish-flesh, but there was a certain amount of transparency about this colouring giving it the appearance of pink tissue-paper smeared

with black ink. The nestlings examined by Mr. Mackay (*Auk* XIII., p. 47) which had black legs and feet, were no doubt more advanced in age than those examined by me, none of which were more than two days old. Dr. Louis Bureau says (*Ornis*., Vol. XIV., p. 302) that the feet are blackish-brown during the first days, and afterwards black.

[Mr. G. R. Humphreys kindly showed me the nestlings of the Roseate Terns, and certainly the difference in the colour of the legs between this species and the Common and Arctic Terns of the same age was very remarkable.—R. M. BARRINGTON.]

THE "BRITISH BIRDS" MARKING SCHEME.*

PROGRESS FOR 1913 AND SOME RESULTS.

BY

H. F. WITHERBY.

It is very satisfactory to be able to report the continued success of the BRITISH BIRDS Marking Scheme.

The number of readers who have helped in the ringing since my last report has increased to ninety, and the number of birds ringed is again much larger than previous records, as will be seen by the following figures :—

NUMBER OF BIRDS RINGED.				
In 1909	...	...	...	2,171
„ 1910	...	...	...	7,910
„ 1911	...	...	...	10,416
„ 1912	...	...	...	11,483
„ 1913	...	...	...	14,843
				<hr/>
Total				46,823
				<hr/>

Mr. H. W. Robinson once again heads the list with the extraordinary total of two thousand two hundred and fifty-five, and this year Dr. H. J. Moon runs him close with one thousand nine hundred and twenty-four, a perhaps more remarkable total because Dr. Moon has ringed mostly small birds. Mr. F. W. Smalley with one thousand one hundred and forty-two is a splendid third, while Miss Pease, Messrs. B. Pickard, W. E. Suggitt, J. R. B. Masfield, and A. Mayall have all ringed over five hundred each. No less than twenty-two others have ringed one hundred and over, and as already mentioned the total number of ringers has increased, so that we have made an all-round advance.

The species ringed have been, as usual, very varied, and the number of individuals ringed of some species is now becoming very large. In the case of the Black-headed Gull we have ringed nearly twelve thousand,

* For the 1912 Report, see Vol. VI., pp. 177-183.

and this number should provide sufficient returns for a comprehensive report, and this Messrs. F. W. Smalley and H. W. Robinson have very kindly promised to undertake when sufficient time has elapsed to allow the bulk of returns to come in. It seems therefore unnecessary to ring more of this species, and I hope that other gulls may receive more attention in consequence.

The recoveries reported during the twelve months have been numerous, and now that the purpose of the ring is becoming more widely known, there is no doubt that a greater proportion of recoveries are reported.

Attention may here be drawn briefly to a few of the more interesting recoveries during the year. Adults of the Jackdaw, Starling, Robin, Chaffinch, Swallow, and Blackbird ringed in the breeding-season from 1910-12 were found in the same places in the summer of 1913. Examples of the Rook, Jackdaw, Starling, Meadow-Pipit, Willow-Warbler, Song-Thrush, Martin, and Woodcock ringed as juveniles in 1910-12, were reported from the places where they were reared in the breeding-season of 1913, while other juveniles have been reported in following summers from near the place at which they were ringed, and others far away. Of recoveries abroad we have had the two notable Swallows—Mr. Masfield's from Staffordshire to Natal, and Mr. Blyth's from Ayrshire to Orange Free State. A Starling has been reported from Holland; Mistle-Thrush, Wheatear, Whinchat, Mallard, Common, Sandwich and Little Terns, and Herring-Gull from France; Lapwings and Turtle-Dove from Portugal; a Pochard from Mecklenburg, and a number of most interesting records of Cormorants and Lesser Black-backed Gulls from France, Spain, and Portugal.

In my last report I promised some statistics with regard to the proportion of recoveries as compared to birds ringed, and I am now able to give some information on this point. Of the birds ringed to the date of my last report, viz. 31,980 in number, we have had reported

971, or 3.3 per cent. This, I think, must be considered a very good percentage on so large a total, but of course it must be understood that many of these recoveries will teach us little or nothing, and the percentage of really valuable recoveries is less than 3 per cent. On the other hand this percentage is certain to increase in the course of a few years.

The proportion of recoveries of different species varies from 100 per centum to nothing, and the following details of a few of those species of which we have ringed large numbers will perhaps be interesting:—

SOME PERCENTAGES OF RECOVERIES.

Species.	Number Ringed 1910-12.	Number recovered to date.	Percentages of recoveries.
Starling	3027	211	6.9
Greenfinch	775	11	1.4
Chaffinch	740	15	2.0
Meadow-Pipit	254	5	1.9
Pied Wagtail	183	7	3.8
Willow-Warbler	562	12	2.1
Song-Thrush	2128	28	1.3
Blackbird	1457	54	3.7
Redbreast	862	30	3.4
Swallow	1591	17	1.0
House-Martin	318	7	2.2
Cuckoo	44	5	11.3
Mallard	222	50	22.5
Lapwing	1266	24	1.8
Curlew	113	6	5.3
Snipe	79	7	8.8
Woodcock	141	15	10.6
Common Tern	2671	66	2.4
Black-headed Gull	7854	209	2.6
Lesser Black-backed Gull	333	10	3.3

NUMBER OF BIRDS "RINGED."

MR. H. W. ROBINSON (2255), Dr. H. J. Moon (1924), Messrs. F. W. Smalley (1142), B. Pickard (777), W. E. Suggitt (759), Miss A. Pease (680), Messrs. J. R. B. Masefield (553), A. Mayall (538), N. H. Joy (457), J. Bartholomew (438), M. Portal (375), A. W. Boyd (315), Mr. R. O. and Miss A. Blyth (273), Messrs. J. D. Patterson & W. B. Irwin (213), Miss C. M. Acland (210), Messrs. T. C. Hobbs (208), R. M. Barrington (200), E. W. Hendy (185), North London Natural History Society (Mr. W. E. Glegg, Hon. Sec.) (171), Captain W.

Mackenzie (169), Messrs. A. Henderson (per Mr. A. R. Haig Brown) (160), C. Hyslop (Gamekeeper to Mr. H. S. Gladstone) (137), T. A. Coward (124), T. F. Greenwood (120), Dr. N. F. Ticehurst (117), Mr. J. M. Campbell (115), Messrs. E. F., J. K. and H. M. Stanford (113), Messrs. H. W. Ford-Lindsay (112), J. Steele Elliott (110), G. B. Hony (100), Mrs. Patteson (95), Messrs. A. Bankes (94), A. G. Leigh (94), Miss S. Mounsey Heysham (80), Mr. P. A. and Miss V. E. Buxton (74), Mr. A. T. Wallis (73), Miss M. H. Greg (71), Messrs. H. Bentham (64), W. W. Grant (63), W. T. Blackwood (56), W. J. Norwood Ryan (51), C. K. Parker (50), J. Murray (Gamekeeper to Mr. H. S. Gladstone) (47), W. Davies (41), G. W. Kerr (40), G. R. Starley & H. G. Wagstaff (39), J. P. Dolan (39), E. de Hamel (38), Miss J. Crookes (32), Mr. H. L. Popham (32), Colonel R. H. Rattray (32), Messrs. F. C. Cook (31), A. Broomfield (29), R. Burnier (29), Sir Richard Graham (28), Messrs. H. H. Storey (28), C. F. and M. F. D. Archibald (26), J. L. Bonhote (25), G. R. Humphreys (25), D. A. J. Buxton (23), E. A. Eason (21), and others who have ringed twenty or under each.

		'09	'10	'11	'12	'13	Total.
Crow, Carrion ...	...	—	11	6	—	5	22
Rook ...	...	—	1	64	35	23	123
Jackdaw ...	...	11	5	15	6	15	52
Magpie ...	...	—	7	4	4	7	22
Starling ...	...	21	428	1109	1469	1133	4160
Greenfinch ...	...	28	100	208	439	381	1156
Twite ...	...	—	—	—	—	24	24
Redpoll, Lesser ...	...	—	8	—	19	45	72
Linnet ...	...	20	65	63	64	148	360
Bullfinch ...	...	—	8	16	18	22	64
Chaffinch ...	...	6	103	271	360	331	1071
Sparrow, House ...	...	8	109	85	60	175	437
Sparrow, Tree ...	...	17	49	24	33	27	150
Bunting, Yellow ...	...	4	13	31	127	41	216
Bunting, Reed ...	...	2	8	40	17	39	106
Lark, Sky ...	...	1	20	39	138	390	588
Pipit, Tree ...	...	14	26	19	38	27	124
Pipit, Meadow ...	...	27	32	75	120	318	572
Wagtail, Yellow ...	...	1	—	—	—	22	23
Wagtail, Grey ...	...	5	6	13	23	17	64
Wagtail, Pied ...	...	12	29	42	100	114	297
Tit, Great ...	...	16	127	154	73	221	591
Tit, Blue ...	...	12	54	144	124	228	562
Tit, Coal ...	...	—	12	26	9	24	71
Tit, Marsh ...	...	—	25	3	3	17	48
Tit, Long-tailed ...	...	—	3	—	5	28	36
Wren, Golden-crested ...	...	—	16	15	—	1	32
Shrike, Red-backed ...	...	2	15	13	9	8	47
Flycatcher, Spotted ...	...	23	65	64	54	84	290
Chiffchaff ...	...	2	16	5	5	14	42

	'09	'10	'11	'12	'13	Total.
Warbler, Willow	... 50	107	139	266	251	813
Warbler, Wood ...	... —	12	27	7	20	66
Warbler, Reed ...	... —	4	10	14	60	88
Warbler, Sedge ...	... 1	4	12	21	43	81
Warbler, Garden	... 3	9	13	17	20	62
Blackcap	... —	7	12	4	7	30
Whitethroat	... 22	53	33	21	43	172
Whitethroat, Lesser	... 1	19	5	15	20	60
Fieldfare	... —	48	30	7	—	85
Thrush, Mistle	... 2	48	40	83	82	255
Thrush, Song	... 71	625	693	739	1197	3325
Redwing	... —	7	20	4	5	36
Ouzel, Ring	... —	—	9	22	20	51
Blackbird	... 83	505	421	448	626	2083
Wheatear	... 1	15	1	34	19	70
Whinchat	... 7	30	28	21	41	127
Stonechat	... —	10	19	8	55	92
Redstart	... 1	15	35	26	31	108
Nightingale	... —	11	4	—	8	23
Redbreast	... 41	217	322	282	355	1217
Sparrow, Hedge	... 18	117	198	226	268	827
Wren	... 9	38	62	76	101	286
Dipper	... 4	9	22	23	15	73
Swallow	... 113	463	594	421	653	2244
Martin	... 13	128	73	104	160	478
Martin, Sand	... —	25	66	1	118	210
Nightjar	... 3	—	3	11	4	21
Wryneck	... 14	16	1	12	11	54
Cuckoo	... 4	4	13	23	23	67
Owl, Barn	... —	10	—	19	14	43
Owl, Tawny	... —	13	6	18	7	44
Hawk, Sparrow	... —	5	19	11	5	40
Heron, Common	... 14	13	22	30	24	103
Sheld-Duck	... 1	24	2	10	1	38
Mallard	... 11	20	139	52	200	422
Teal	... 1	21	3	1	22	48
Duck, Tufted	... 3	—	2	—	20	25
Cormorant	... —	3	25	54	266	348
Shag	... —	4	—	23	15	42
Gannet	... —	—	—	—	134	134
Shearwater, Manx	... —	—	—	60	9	69
Wood-Pigeon	... 3	20	22	33	26	104
Dove, Stock	... 1	4	6	7	9	27
Dove, Turtle	... 1	11	11	—	10	33

		'09	'10	'11	'12	'13	Total.
Oystercatcher ...	...	7	16	8	6	10	47
Plover, Ringed ...	...	—	35	12	20	28	95
Plover, Golden ...	...	—	2	2	13	7	24
Lapwing ...	...	56	254	280	676	558	1824
Sandpiper, Common ...	...	5	10	29	36	24	104
Redshank ...	...	5	19	12	68	28	132
Curlew, Common ...	...	14	10	34	55	15	128
Snipe, Common ...	...	1	23	21	34	22	101
Woodcock ...	...	6	10	68	57	83	224
Tern, Sandwich ...	...	57	79	24	22	203	385
Tern, Common ...	...	786	836	669	380	51	2722
Tern, Arctic ...	...	25	—	1	1	3	30
Tern, Common or Arctic	...	—	25	5	57	1	88
Tern, Little ...	...	—	31	13	85	35	164
Gull, Black-headed ...	...	417	1828	2949	2660	3915	11769
Gull, Common ...	...	—	184	248	27	11	470
Gull, Herring ...	...	5	117	48	178	82	430
Gull, Lesser Black-backed	...	12	137	62	122	454	787
Gull, Great Black-backed	...	1	8	13	1	2	25
Razorbill ...	...	—	31	3	—	2	36
Guillemot ...	...	—	23	—	—	—	23
Puffin ...	...	4	15	12	108	207	346
Moor-Hen ...	...	—	34	23	24	39	120
Grouse, Red ...	...	7	3	19	156	10	195
Pheasant ...	...	7	6	30	1	4	48
Partridge, Common ...	...	1	1	20	12	22	56

NOTE.—Forty-three species of which less than twenty individuals in all have been ringed, are omitted from this list

NOTES

MIGRATION NOTES FROM RATHLIN ISLAND, CO. ANTRIM, AUTUMN, 1913.

DURING part of September and October, 1913, we were in Rathlin Island, off co. Antrim, and while there observed among others the following species which are seldom recorded from the north of Ireland.

GREENLAND REDPOLL (*Carduelis l. rostrata*).—On September 25th we procured a female Mealy Redpoll. This has been examined by Mr. Witherby and pronounced to be of this form, which has very rarely been recorded from Ireland. The bird was accompanied by another, apparently a male.

WHITE WAGTAIL (*Motacilla a. alba*).—On September 12-13th off Ballycastle (on the mainland opposite Rathlin) we saw between twenty and thirty White Wagtails on the seashore among a much larger number of Pied Wagtails. A few couples and single birds were seen on Rathlin on the 15th, 16th, and 18th, also associating with Pied Wagtails.

GREENLAND WHEATEAR (*Ænanthe æ. leucorrhoa*).—Specimens obtained from September 16th to 30th were all of this form.

COMMON EIDER (*Somateria m. mollissima*).—On September 17th-18th four Eider ducks were observed swimming in Church Bay. On the 19th they were joined by a drake, but on the next day three ducks were shot and the other two birds had disappeared. On October 1st, however, four more ducks were seen in the same place. The islanders call this bird the "Shelduck," probably owing to the parti-coloured plumage of the male, and say that it is not uncommon in spring and autumn. The lighthouse-keepers say that fifty or sixty Eiders are sometimes seen.

TURTLE-DOVE (*Streptopelia t. turtur*).—On September 24th, after a south-easterly gale, we saw a single Turtle-Dove.

MARY G. S. BEST.

MAUD D. HAVILAND.

LITTLE BUNTING IN YORKSHIRE.

MR. THOS. STEPHENSON, of Whitby, informs me that, on October 6th, 1913, a Little Bunting (*Emberiza pusilla*) was captured near that town, and was kept alive for nearly three weeks. It was forwarded to Mr. W. Eagle Clarke, who identified it and pronounced it to be a male.

The Little Bunting has been once noted on the north side of the Tees-mouth, but the Whitby specimen is the first recorded example for Yorkshire, and, therefore, an addition to the county list.

T. H. NELSON.

BLUE-HEADED WAGTAILS IN SOUTH DEVON.

ON May 26th, 1913, while sitting on a footbridge which spans a stream some three miles from Seaton, my attention was attracted by a pair of Wagtails which came and settled on a little island of stones within a few yards of my companion and myself. I had never seen a specimen of the Blue-headed Wagtail (*Motacilla f. flava*) in the flesh but felt sure that that was what these birds must be, a belief confirmed by the careful examination I was able to make of their plumage on this and subsequent occasions.

The male had the crown and back of the head of a greyish-blue colour; the back brown with a suggestion of green which, however, was lost in the tail-coverts; the tail black with the exception of the (I think) *two* outer pairs; the under-parts yellow, rather less bright than in *M. f. raii*, fading into white on the throat; wing-feathers brown, edged with yellow; a white streak ran above the eye and a fainter one below; the legs and feet were black.

In the female the whole of the upper-parts were of a greenish-brown, as also were the cheeks with the exception of a pale yellow "smudge"; the underparts slightly paler than those of her mate and, I believe, only the *one* outer pair of tail-feathers white—otherwise similar to the male.

I spent a long time trying to make absolutely sure about the tail-feathers, and in my own mind am certain about them, but venture to suggest that it is practically impossible to be perfectly sure without handling the bird.

On May 28th-30th I watched them again for a long time. Most of their time was spent in fly-catching, but on five occasions I saw one of them fly off with a small feather. On each of these occasions they followed the course of the stream beneath thick overhanging bushes for some thirty yards, then swung into an adjacent field where I invariably managed to lose sight of them. This field was very wet, almost marshy in fact, and covered with numberless isolated tufts of rank grass. After May 30th I never saw the two together again, but during the next fortnight I constantly saw the male and twice the female, after which I had, unfortunately, no further opportunity of visiting the spot.

The nest, I regret to say, I was unable to find.

LEWIS R. W. LOYD.

BREEDING-HABITS OF THE MARSH- AND
WILLOW-TITS.

IN the neighbourhood of Henley, on the Berkshire side of the river, the Marsh-Tit is comparatively rare as a breeding species, and I doubt if I have seen more than twenty nests all told. In *every* case these nests were placed in natural holes or in boxes, in no single instance was the hole bored by the birds or enlarged. I had often seen Marsh-Tits breeding in holes drilled by themselves in other parts of the country, particularly Oxfordshire and near Newcastle. When the Willow-Tit became a recognized species I was in hopes that the difference of nesting-sites might prove a reliable indication of the two species. With this point in view I caught birds from the natural holes and forwarded them to Dr. Hartert whose verdict was that they were Marsh-Tits. I then obtained a specimen from a bored hole near Newcastle, and the same gentleman very kindly again identified the bird; it proved to be *Parus palustris dresseri*; thereby shattering my hopes! These birds are common round Newcastle and all the nests found were in drilled holes. With regard to the amount of moss used for the nest-foundation, it would seem to vary according to the hole. Whereas there is hardly any when the nest is placed in an artificial box, there is a considerable quantity when in irregularly-shaped natural cavities. I believe the Willow-Tit has been identified in Berkshire, but I cannot find the reference, and I am not aware that it has been proved to breed in the county.

HEATLEY NOBLE.

[Mr. C. J. Alexander recorded the Willow-Tit from near Reading (Vol. IV., p. 147) and there is a skin in the British Museum labelled "Reading 23.2.'01."—H.F.W.]

GOLDCREST NESTING IN NORTH ANGLESEY.

IN reference to Mr. Forrest's note on the Goldcrest nesting in North Anglesey (*antea* p. 52), I may say that I found a nest with fledged young at Llys Dulas, north-east Anglesey, on June 5th, 1903, and that I noted that the bird was common then in that district.

S. G. CUMMINGS.

BARRED WARBLER IN LINCOLNSHIRE.

ON September 6th, 1913, I shot an immature Barred Warbler (*Sylvia nisoria*) from a hedge close to the sea-bank at North Cotes. The wind was E.N.E. with fine weather and a good many small birds were moving, although there was no "rush." Among others I observed Redstarts,

Hedge-Sparrows, Willow-Warblers, Garden-Warblers, Blue Tits and Wheatears, all except the last-named in small numbers. This I believe to be the sixth occurrence in the county.

G. H. CATON HAIGH.

RED-FOOTED FALCON REPORTED FROM ABERDEENSHIRE.

I HAVE recently examined an immature female Red-footed Falcon, said to have been shot at Aboyne, Aberdeenshire, on October 17th, 1913. The bird was sent to me freshly mounted by E. T. Clarke, taxidermist, of Cheltenham. He tells me that Mr. W. L. Mellersh, of Cheltenham, examined it in the flesh, and that it was undoubtedly a female "with some tiny eggs in her." The bird was, however, in the first year's plumage. I know nothing more of its history.

W. R. OGILVIE-GRANT.

[The Red-footed Falcon has only been recorded four times from Scotland, and curiously two of these are from Aberdeenshire.—H.F.W.]

RUDDY SHELD-DUCK IN CHESHIRE.

THERE is, I fear, no doubt as to the origin of the Ruddy Sheld-Ducks (*Casarca ferruginea*) which this summer and autumn appeared in various parts of Cheshire. In addition to the bird which remained for over a month on Rostherne Mere (*ante*, p. 118), one, very likely the same bird, was shot on Frodsham Marsh on September 4th, and two were killed in October at Stretford, just on the county border. Lord Newton informs me that he has for some time bred and released birds of this species, that they usually leave his waters in Lyme Park in August and return at the end of October or a little later, and that this year two or three are missing.

T. A. COWARD.

LONG-TAILED DUCK IN WARWICKSHIRE.

ON October 12th, 1913, I saw at Packington, Warwickshire, a specimen of the Long-tailed Duck (*Clangula hyemalis*), which was consorting with a pair of Mallard (than the female of which it was noticeably smaller) though the latter immediately left the pool; the bird under observation remained for a few minutes at the opposite side, but it then rose and before leaving the vicinity twice flew round, on each occasion passing within about twenty yards of me, the first time very low down and the second at a slightly greater height. I thus obtained excellent views of the bird and saw that the back and wings were uniformly brown,

the latter without any marking at all; the cheeks and sides of the neck were pale buff, in strong contrast to the brown of the upper surface of the head and neck and the brown band crossing the upper-breast. The bird passed so close to me that I was also able to notice the characteristic high crown and short bill.

An examination of an immature male which I have and the females in the Birmingham Museum, shows that whilst the latter (all mature birds) are much whiter on the head than the bird I saw, the former apparently only differs from it in the more buff colour of the cheeks and neck. From this I think that the bird I saw was a female in the plumage of perhaps the second winter.

Although the Long-tailed Duck has been recorded on, I think, four occasions from the neighbouring county of Staffordshire, it does not appear to have been previously reported from Warwickshire (it is not included in the list in the *Victoria History*, Vol. I.); for this reason I have described so fully the specimen I saw.

A. GEOFFREY LEIGH.

[Six specimens have been definitely recorded from Staffordshire.—F.C.R.J.]

TURTLE-DOVE IN CO. DUBLIN.

ON May 28th, 1913, Dr. George Scriven noted two birds at Hampton Hall, Balbriggan, which he believed to be Turtle-Doves (*Streptopelia t. turtur*). They were afterwards seen on several occasions by his gamekeeper who shares his opinion. I was not fortunate enough to see them, but I have reason to believe that this is the second year of their appearance here. Dr. Scriven is a sportsman and a competent observer.

CHARLES W. BENSON.

BREEDING-HABITS OF OYSTERCATCHERS.

IN years gone by Oystercatchers (*Hæmatopus o. ostralegus*) were well represented during the breeding-season on Blakeney Point, Norfolk. But for reasons unknown they forsook the place almost entirely, and during the last four or five years one pair only has been nesting there. Last year (1912) we had one cock-bird mated to two hens. Both the latter laid soon after each other, the one laying four eggs the other three. In the first clutch all the eggs were infertile; in the second two, the third egg being brought off successfully.

This year we had two pairs nesting at least, though there were often more than four adult birds about. Both pairs

laid during the last week of May. One lot brought off their young successfully and laid again about the 7th of July. The other pair had six eggs also in the last week of May and were still sitting in the first week of July, that completing their sixth week. All the eggs were addled during the second week of incubation when the birds were disturbed by visitors.



In my opinion there were two hens sharing the nest. That might even explain the fact that the birds incubated for six weeks, for according to personal experience at least, I find that a bird sitting on addled eggs deserts usually within three days of her normal time.

It appears to be a common habit with the Oystercatcher when laying three eggs only, to pull in a large stone as compensation. Whether this is coincidence or purpose it is hard to say. (A similar case has been brought to my notice with the Ringed Plover.) The third egg was already hatched when the accompanying photograph was taken. W. ROWAN.

HERRING-GULLS DIVING.

ON August 9th, 1913, I watched some adult Herring-Gulls (*Larus a. argentatus*) diving for food in comparatively deep water at the mouth of the river at Looe, Cornwall. Their action resembled that of the Terns, for they completely submerged themselves at every dive. This habit is probably

peculiar to the birds frequenting these clear waters, where refuse is visible at a considerable distance under the surface. Mr. W. Radcliffe Saunders states in the *Field* of November 14th, 1908, that he witnessed the same performance on the part of Kittiwakes, Black-headed Gulls, and immature Herring-Gulls at Torquay, but with this exception, I have not seen this habit previously recorded, at least as regards Herring-Gulls.

S. G. CUMMINGS.

PECULIAR NESTING-SITE OF BLACK GUILLEMOTS.

DURING the last two nesting-seasons Black Guillemots (*Uria grylle*) have taken to the much-frequented piers of Bangor and Ballywalter both in the county of Down, for their nesting operations. In the *Whig* for September 20th and 27th a correspondent gives a clear description of these birds which nested at Bangor Pier, and my friend Mr. Hughes of Ballywalter, a most careful observer, gave me a full description of this species, and tells me it has nested between the stones of the Ballywalter Pier for the last two years and probably longer.

His description was so good that there was no mistaking the bird, but to make doubly sure I showed him a good coloured plate, which of course he easily recognized. I am glad to say the Coastguards protect these birds which are now pretty tame, and it is quite easy to get within a couple of yards of them as they sit on the pier-wall.

It is a most extraordinary thing that such wild birds as these should nest in such frequented places. The only way I can account for it is that their old breeding-haunts in Rathlin, mentioned by Thompson in his *Natural History of Ireland*, should have got congested. The birds having flown over to the co. Down shore to look for a site, and finding no rocky crevices to make their nest in such as at Rathlin, and perhaps not having time to go on a longer hunt, took to the above-mentioned piers as the best substitute for the cliffs with their rock-strewn bases. These, with rough rocky islands, have always been, to me at any rate, connected with the nesting of this species amongst the northern islands of the west coast of Scotland.

W. H. WORKMAN.

CAROLINA CRAKE IN OUTER HEBRIDES.

AN immature male Carolina Crake (*Porzana carolina*) was shot by Mr. A. Blain (Galson Lodge, Stornoway), near

Ness, Lewis, Outer Hebrides, on November 12th, 1913, and sent to the Natural History Museum in the flesh. It may be remarked that three out of the four examples of this species which have been recorded from Great Britain are in the Museum collection. I have already recorded this specimen in *Country Life* of November 21st.

W. R. OGILVIE-GRANT.

CARRION-CROW ROOST.—Mr. S. E. Brock describes (*Scot. Nat.*, 1913, pp. 188-9) a remarkable "roost" of *Corvus c. corone* in a small plantation near the Bathgate Hills. On October 31st he counted seventy-six Carrion-Crows go into the wood, but on November 18th there were about four hundred, in January, 1913, about three hundred, and in March about five hundred. Mr. Brock states that there are probably not more than sixty nesting pairs in the whole of West Lothian. These birds must therefore be immigrants.

EASTERN SKY-LARK IN IRELAND.—In Volume V., p. 340, it was mentioned that Professor C. J. Patten had obtained a Sky-Lark at the Tuskar Rock (Wexford) on October 5th, 1911. Professor Patten considered it "provisionally" to be a specimen of *Alauda a. cantarella*, but now announces (*Zool.*, 1913, pp. 333-6) that he has had it examined by Mr. W. E. Clarke and Dr. E. Hartert, who state that it is an example of *Alauda a. cinerea* which has been detected twice previously in the British Isles, viz. at the Flannans (O. Hebrides) on February 24th, 1906, and at the Old Head of Kinsale Lighthouse, co. Cork, on October 7th, 1910. Professor Patten gives reasons for supposing that the bird struck the Light on October 1st and had been lying dead upon the roof where he found it on October 5th. We fail to see any good purpose in so long delaying the proper identification of the bird.

HOOPOE OFF CAITHNESS.—Mr. G. Bain reports (*Scot. Nat.*, 1913, p. 234) that a specimen of *Upupa epops* came on board a fishing-boat in August about twenty-five miles east of Wick.

FULMAR BREEDING IN LEWIS.—Mr. R. Clyne writes (*Scot. Nat.*, 1913, p. 236) that several pairs of *Fulmarus g. glacialis* were breeding in 1913 near Cellar Head on the east side of Lewis, Outer Hebrides. This appears to have been the third season that they have bred there, but they have not been recorded as breeding on the island before.

RINGED PLOVERS NESTING UNDER STONES.—Mr. H. Laidlaw has found several nests of *Charadrius hiaticula* on

Auskerry (Orkney) under large stones sometimes as much as three feet from the mouth of the cavity (*Scot. Nat.*, 1913, p. 212).

SPOTTED REDSHANK IN CUMBERLAND.—Mr. H. Mackay records (*Scot. Nct.*, 1913, p. 234) that a male *Tringa erythropus* was obtained at Skinburness on August 31st, 1913.

BLACK-TAILED GODWIT IN OUTER HEBRIDES.—Mr. F. S. Beveridge announces (*Scot. Nat.*, 1913, p. 235) that he saw a specimen of *Limosa limosa* on the island of Vallay on August 28th, 1913. The bird is rarely observed in the Outer Hebrides.

SCANDINAVIAN LESSER BLACK-BACKED GULL IN STIRLINGSHIRE.—Mr. W. Evans gives (*Scot. Nat.*, 1913, p. 260) an excellent identification of a specimen of *Larus f. fuscus* which he saw on September 15th, 1913, at Grangemouth.

RAZORBILLS AND GUILLEMOTS DESERTING THEIR BREEDING-PLACES.—Mr. C. Kirk states (*Scot. Nat.*, 1913, p. 235) that Guillemots and Razorbills had diminished at Ailsa Craig in 1911 and 1912 and had completely deserted it in 1913. Puffins and Kittiwakes also appeared to have diminished in numbers, but Gannets had if anything increased. It has been suggested that the big gun practice carried out west of Ailsa causes so much concussion as to disturb the birds, but this does not seem to affect them in other quarters. In the next number (p. 260) of our contemporary Miss M. G. S. Best states that at Rathlin Island (north-east Ireland) there was a great diminution of these birds in the past breeding-season. Is it possible that the concussion causes some disturbance in the food supply in certain localities?

BIRDS IN OXFORDSHIRE.—In Mr. O. V. Aplin's account of birds in Oxfordshire for 1910-12 (*Zool.*, 1913, pp. 321-332), there are several occurrences of the Hobby mentioned and in one case a pair nested in 1910 at Wytham (really in Berkshire) and both birds were unfortunately shot. The Little Owl was seen in various places in autumn and spring, but apparently there is no record of breeding yet in Oxfordshire. A Wood-Sandpiper, the first for the county, was "shot from a flock of about eight at Kingham on August 3rd, 1912."



LETTERS



THE ORKNEY BREEDING-RECORD OF THE LONG-TAILED DUCK.

To the Editors of BRITISH BIRDS.

SIRS,—Referring to my letter on this subject published in *BRITISH BIRDS*, November, 1912 (Vol. VI., p. 199), I feel that in fairness to Mr. O. V. Aplin, who originally recorded the breeding of the Long-tailed Duck in Orkney in the *Zoologist*, I should now write the following letter.

Mr. T. P. Aldworth and I have again just returned from Orkney and we made most exhaustive inquiries concerning this duck and its nesting on Pomona. The following are, we believe, the facts of the case. The eggs and down of some duck, both first and second layings, were taken by a lad, not a competent observer, on the shore of Loch Harray. We saw the place where they were taken and interviewed the lad, whom we both know very well. The position and place of the nests are as far as we know quite correct for the species; anyhow there is no reason from the *position* of the nests on the loch side to doubt that a Long-tailed Duck might nest there. The eggs were taken from these two sites by this lad and sold to a dealer in Orkney—he does not live in Kirkwall—who in his turn sold them to a collector in the south. It is difficult to write without mentioning names! I presume Mr. O. V. Aplin then saw them and recorded the occurrence of the nesting of this species in Orkney.

The evidence is as follows as regards the birds. They were undoubtedly *on the Loch*, seen on the Loch by Mr. John Omand, of Stenness, a first-class field-naturalist, and also on the Loch by two or three others. There is no doubt the birds were there that year.

If the eggs and down can be identified for certain, the Long-tailed Duck has bred in Orkney. These eggs were taken on Pomona and the birds seen in close proximity to the nest. It seems it only depends on the certain identification of them by down and eggs.

Seeböhm says it can be done. If this is not possible then the record is worth nothing, because no competent naturalist saw the eggs *in situ* or the bird leave the nest, and the local name for Pintail is Long-tailed Duck, and the Pintail breeds in Orkney.

I think that the possessor of these eggs ought to thank us for taking all this trouble for him, but it is to be hoped that he will now allow the eggs and down to be examined and compared by a specialist in this matter so that the facts we have gathered may have a greater value.

JAMES R. HALE.

[The eggs and down have been seen by one of us, who is satisfied that they are correctly identified as those of the Long-tailed Duck. There is no doubt that a clutch of eggs with down of this species can be identified with certainty.—EDS.]

LESSER WHITETHROAT BREEDING IN SOUTH DEVON.

To the Editors of BRITISH BIRDS.

SIRS,—In reference to Mr. S. G. Cummings's letter and inquiries in your August issue (p. 92) concerning the Cirl Bunting (*Emberiza cirlus*) and the Lesser Whitethroat (*Sylvia c. curruca*), the Cirl Bunting is far from being an uncommon bird in the neighbourhood of Beer, Devon, the only reason I did not mention it in my letter (p. 63) being that at the time of writing I had been unable to find a nest. Of the Lesser Whitethroat I found a number of nests, all but one in the rough growth near what is locally known as the Roman Quarries at Beer. In one particular spot within a radius of well under one hundred yards there was a large colony (if the word is permissible) of these little birds, and I have often seen eight or ten of them at one time. I never saw a Lesser Whitethroat anywhere else in the neighbourhood except one pair which nested in the bottom of a hedge about a mile away.

May I tender my apologies to Mr. Cummings for my tardiness in answering his letter, my excuse being that I did not see the issue until this week.

LEWIS R. W. LOYD.

MAIDA VALE, LONDON, W.

WHINCHAT BREEDING IN CO. CORK.

To the Editors of BRITISH BIRDS.

SIRS,—In Mr. Stenhouse's note (*antea*, p. 53) on this subject he stated that the young had left the nest by May 15th; that is to say, the full complement of eggs was laid by the 20th April at the latest. This date, in my experience, is extraordinary, and is I venture to say, unprecedented.

S. G. CUMMINGS.

UPTON HEATH, CHESTER, November 4th, 1913.



REVIEWS

The Gannet: a Bird with a History. By J. H. Gurney, F.L.S.
pp. lii., 568. Many illustrations. Witherby and Co.
27s. 6d. net.

MR. J. H. GURNEY's monograph forms an attractive volume of some 568 pages, copiously illustrated with maps and reproductions from photographs, diagrams, etc. There are also two coloured plates, one of which illustrates the nestling, while the other represents the eggs of this species. The statement on the title page and repeated on pp. xv. and 368, that the figure of the young Gannet is drawn or repainted by Joseph Wolf is however due to a misapprehension. It is in fact reproduced from the original water-colour sketch by Dr. Cunningham and bears no trace of Wolf's master hand. The figure, reversed and re-drawn by Wolf, appeared in the *Ibis* for 1866, pl. I., and will repay careful comparison.

The great value of Mr. Gurney's work lies in the careful investigation which the author has carried out into the history of each colony. Most of our knowledge of the birds of our own country only dates from about a century ago, and we owe a deep debt of gratitude to Dr. Cunningham, Professor Newton, and Mr. Gurney for the careful and painstaking way in which they have traced out the historical references buried in the ancient "Inventories" in the Record Office and in the works of long-forgotten writers of the fifteenth to the seventeenth century. Few ornithologists combine the qualities or training necessary for success in this kind of investigation, and we are the more grateful to Mr. Gurney for collecting and digesting this valuable material so as to make it accessible to all.

Perhaps we may be allowed to add to the list of Naturalists who have visited the Bass (p. 255) the name of Ernst Fleischer, a personal friend of the Naumanns and publisher of their works, as well as those of "Fugle" Faber. He paid his visit at the end of June, 1820, and it was from him that Naumann obtained the information which he incorporated in his great work.

No light is thrown on the question as to what is the cause of the disappearance of the great majority of the young Gannets during the first year or so of their existence and their consequent scarcity at the great breeding-stations. It is however a curious coincidence that immature birds should be most numerous at the most inaccessible of our British

colonies. When passing near the Stack of "Stack and Skerry" in 1912 we noticed a much larger proportion of these immature birds than at the Bass, and the same fact was also noted by Mr. Harvie-Brown and Professor Newton. No ornithologist has ever landed on this islet, and the occasional visits of fishermen are now apparently abandoned altogether.

The large breeding-station on Eldey (p. 284) is treated somewhat briefly. Professor Newton's sketch gives a good idea of the appearance of this remarkable rock, except that the droppings of the birds cause the almost perpendicular walls to appear white instead of dark as shown in the sketch. We were informed in 1912 that stanchions are now fixed in the rock and that the Gannet harvest is now regularly worked from the Westmann Islands, so that it should not be difficult to obtain details of the colony. Whether the Geirfugladrangr is also tenanted by a large colony seems rather questionable, but there seems reason to suppose that Grimsey is not the only breeding-place in north Iceland. Mr. Gurney refers to Drangey as situated on the north-east of Iceland (p. 288) but this is incorrect, as it lies half-way down the Skagafjördr, nearly two degrees west of Grimsey. The note in Slater's *Manual of the Birds of Iceland* (p. 37) is obviously carelessly written, for he states his belief in the existence of another colony "on, or near, Cape Reykjanes, the north-east point of Iceland." The north-east point is Cape Langanes. Reykjanes lies on the south-west and is not far from the Fuglasker and Eldey.

Detailed accounts are given of each of the fifteen known breeding-stations of this species on both sides of the Atlantic and on pp. 324-325 Mr. Gurney gives an estimate of the numbers present at the beginning of the breeding-season. The figures given are naturally only approximate, but are in most cases rather below than above the mark, and the total of 101,000 probably represents tolerably accurately the Gannet population of the North Atlantic.

Mr. Gurney then proceeds to deal with the life-history of the Gannet and begins appropriately with the nest and egg. We do not understand why the green colour of the shell should be attributed on Mr. Drane's authority to "transmitted light" (p. 343). The egg-shells of all the Gannets, Cormorants, and Shags are pale bluish-green in colour, but this colour is to a great extent concealed by a calcareous outer deposit. As the shell is not perfectly opaque, the ground-colour is naturally visible when viewed from within and held up to the light, but where there is a defective patch in the outer

deposit, the ground-colour is plainly apparent externally, and its presence is not due to the action of light in any way. Calcium carbonate is rather more than a "valuable ingredient" in the formation of an egg-shell, and would be more aptly described as "*the* main ingredient" of both egg-shells and fish bones. A list is given on p. 357 of the principal figures published of Gannet's eggs. The best I have seen is that by Mr. H. Grönvold (*The British Bird Book*, IV., Egg plate v., fig. 3), but this is not mentioned in Mr. Gurney's list. It is one of the most curious and significant facts in the history of this species, that though Gesner in 1555 recorded the fact that the Gannet incubates its egg by covering it with its webbed feet, yet Howard Saunders, writing as late as 1884, spoke of the bird's "supposed habit of hatching its egg with its foot!"

Reference has recently been made in this journal (*antea*, p. 99) to the long incubation period of this species, and interesting details as to the treatment of the young are given by Mr. Gurney, but the remarkable greeting formalities are somewhat briefly dismissed, and we are told nothing of the courtship display, a subject on which information seems to be almost entirely lacking. The list of inland occurrences in Great Britain (p. 443) might be considerably extended. Thus for Berkshire two are here recorded on Mr. Clark Kennedy's authority, but six are now known to have been actually obtained: for Notts Mr. Whitaker has noted over a dozen occurrences instead of nine, and Derbyshire (six obtained and others seen), Staffordshire (3 at least), Warwick (4), Herts (3), Bucks (2) and several other inland counties might have been added to the list. Similarly the lists of Continental occurrences, which are admittedly not exhaustive, are rather deceptive. On p. 36 three occurrences in Italy are mentioned, but in the last list of Count Arrigoni degli Oddi, eighteen are recorded from Italy alone, as well as others from Sicily and Sardinia.

Some notes on the anatomy and osteology of this species are given in the last chapters of the work, and in appendices there are interesting notes on the other species of the Genus *Sula*, the parasites which have been found infesting them, and on historic and prehistoric remains.

A somewhat formidable list of notanda and corrigenda occupies pp. xlvii.-li., and might have been still further extended. This is partly due to the difficulty of avoiding errors in quotations from obscure Danish and Early English sources. For example the reference to Winge's paper, "Om jordsfundne Fugle fra Danmark," on p. 559 contains

at least four typographical errors, and other similar cases might be pointed out. In the references to the literature of the subject also we think that more definiteness might be expected, and it is irritating to find Seebohm's *History of British Birds*, Lilford's *Coloured Figures of the Birds of the British Islands*, the Fourth Edition of "Yarrell," and Macgillivray's *History of British Birds* all quoted as "*British Birds*." Seebohm's *Coloured Figures of the Eggs of British Birds* is barely recognizable as the "Abridged Edition, 1896," of the same writer's "*History of British Birds*." A brief Bibliography of the subject is given on pp. 13-15, but even here the titles are unnecessarily compressed in some cases. There seems no adequate reason why the title of Lacepède and Daudin's work should be omitted, and "Muller, Færoenes Fug." would be more intelligible if printed in full. Seebohm's account of the Bass based on his own and E. V. Seebohm's notes made in 1870 and 1883 is at least as worthy of a place in this list as Lord Lilford's casual notes on the Gannet, which are prefaced by the remark that he has never visited a breeding-station of this species. Hantzsch's *Vogelwelt Islands*, though referred to in the text is omitted from this list, and Mr. F. B. Kirkman's article in the *British Bird Book* should also have been included, as it contains the fullest account of the breeding-habits and displays of this species yet published. On the other hand some of the works mentioned, such as the *Vertebrate Fauna of the Tay Area*, contain next to nothing on the subject.

The work is a valuable contribution to ornithology, not merely on account of its positive results, which are considerable, but also in that it points out many departments in which our knowledge is still defective. It is well got up, and the series of photographs illustrating nearly all the breeding-stations, is a most valuable and interesting one. We congratulate the author on the results of his work and trust that he will follow it up by further investigations into the history of our other great sea-bird colonies which still await an historian.

F.C.R.J.

Report on Scottish Ornithology in 1912 including Migration.

By Leonora Jeffrey Rintoul and Evelyn V. Baxter.
Oliver and Boyd. 1s. 6d. net.

WE congratulate the authors on this admirable work, which is the second yearly report to be published separately. It is arranged in the same excellent way as the last report so that all the information it contains is easily available for

reference. Many of the more important records have been referred to from time to time in our pages, but a good many interesting items are here published for the first time and to the most important of these we draw attention below. All the dates are in the year 1912.

- CARRION-CROW (*Corvus c. corone*).—Three at the Flannans (Outer Hebrides), November 2nd.
- MEALY REDPOLL (*Carduelis l. linaria*).—Eighteen at the Flannans, October 24th.
- WOOD-LARK (*Lullula a. arborea*).—One at Auskerry (Orkney), October 26th.
- SCANDINAVIAN ROCK-PIPIT (*Anthus s. littoralis*).—One at Pentland Skerries (Orkney), May 9th.
- YELLOW WAGTAIL (*Motacilla f. rayi*).—Two at Fair Isle, May 6th, and one May 7th.
- WHITE WAGTAIL (*M. a. alba*).—A pair bred at Grimista (Shetland).
- RED-BACKED SHRIKE (*Lanius c. collurio*).—Single birds at Fair Isle in June and August and at the Pentland Skerries on June 2nd (three), 3rd, and 4th.
- WAXWING (*Ampelis garrulus*).—One at Stornoway (Outer Hebrides), November 12th.
- BARRED WARBLER (*Sylvia n. nisoria*).—In addition to all those already recorded for 1912, one was procured at Auskerry on August 15th.
- BLACKCAP (*S. a. atricapilla*).—One at Auskerry, December 6th.
- LESSER WHITETHROAT (*S. c. curruca*).—Small numbers at Pentland Skerries in May, a good many June 2nd to 6th, and small numbers from September 19th to October 9th.
- RING-OUZEL (*Turdus t. torquatus*).—Two at Tarbatness (Ross-shire), December 3rd.
- WHINCHAT (*Saxicola r. rubetra*).—One near Cramond Bridge, February 25th.
- BLACK REDSTART (*Phoenicurus o. gibraltariensis*).—One at Pentland Skerries May 7th (and another on May 9th, see *Bull. B.O.C.*, XXXII. p. 177), one at Tarbatness November 6th, one at Fair Isle March 22nd (besides April 25th already mentioned in Vol. VI., p. 351).
- RED-SPOTTED BLUETHROAT (*Luscinia svecica* ? subsp.).—One at Fair Isle, May 10th.
- CONTINENTAL REDBREAST (*Dendralus r. rubecula*).—One at Mull of Galloway, October 11th. A "rush" occurred at the end of October and those examined from Pentland Skerries were of this form.
- WRYNECK (*Iynx t. torquilla*).—Two at Fair Isle, August 22nd, and two at Pentland Skerries, August 30th.
- ROUGH-LEGGED BUZZARD (*Buteo l. lagopus*).—One at Loch Gower, Wigtownshire, March 14th.
- GADWALL (*Anas strepera*).—Two at Fair Isle, April 19th.
- SMEW (*Mergus albellus*).—Quite a number reported in January and February of which one was at Bressay (Shetland).
- TURTLE-DOVE (*Streptopelia t. turtur*).—Occurred at Fair Isle, May, June, July, and September; at Isle of May, May, June, and August; in Outer Hebrides and Ross-shire, September.
- DOTTEREL (*Charadrius morinellus*).—A nest was found in June in Forfarshire—the first for the county.
- SPOTTED REDSHANK (*Tringa erythropus*).—One at Largo Bay (Fife), July 15th.

BLACK-TAILED GODWIT (*Limosa limosa*).—In Kirkcudbrightshire, two August, two September, one October, and one December; one in Inverness-shire, September.

LITTLE AUK (*Alle alle*).—A good account is given of the great visitation in the winter of 1911-12.

CAPERCAILLIE \times BLACKCOCK.—Hybrid shot in Argyllshire more resembled the first-named species. H.F.W.

I. Guide to Selborne. II. Synopsis of the Life of Gilbert White. By W. H. Mullens. Being No. CXC of the *Bulletin of the British Ornithologists' Club*. Witherby. 2s. 6d. net.

OWING to the lamented death of Dr. Selater, the proposed expedition of the British Ornithologists' Club to Selborne did not take place. The "Guide to Selborne" and "Synopsis of the Life of Gilbert White," which had been prepared for the occasion by Mr. W. H. Mullens, appear, however, as a special number of the *Bulletin*. There is no one at the present time more versed in "Selborniana" than Mr. Mullens, and the pamphlet under review maintains the authoritative standard of his previous publications on the subject. In the twenty-seven pages there is given a mass of information, duly corroborated by references, which testifies to the patience and research of the writer, while an appreciation of *The Natural History of Selborne*, occupying the last seven pages, is tempered with kindly, but just, criticism. Certain individuals will always be regarded as factors in the world's progress of thought, and as such the name of Gilbert White will ever be held in high honour. Newton has said that, "more than half the Zoologists of the British Islands for the past eighty years or more have been infected with their love of the study by Gilbert White, and it can hardly be supposed that his influence will cease" (*Dictionary of Birds* (1893-96), Introduction, p. 19). Mr. Mullens, as has already been stated, is well qualified to write of Selborne and its parson, and one really wonders if there is yet anything more to be discovered about this interesting personage. Although no authentic picture of Gilbert White is known, notwithstanding recent rumours to the contrary, we have to thank Mr. Mullens for as graphic, yet concise, a description of this naturalist's home and personality as it is possible for pen and ink to give in so short a space.

H.S.G.

BRITISH BIRDS

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ON THE BREEDING-HABITS OF THE DARTFORD WARBLER.

BY

PERCY F. BUNYARD, F.Z.S., M.B.O.U.

My first introduction to the Dartford Warbler (*Sylvia undata dartfordiensis*) was in 1906 in one of the home counties. Since then I have had exceptional opportunities of studying this most interesting bird, and some forty pairs in four widely separated localities in the south of England have come under my observation, and in each season a considerable time has been spent among them.

With regard to their general habits it is difficult to dogmatize, as like many other species no two pairs seem to behave in exactly the same manner. The great difficulty in keeping such restless birds under close observation for any length of time will be readily appreciated by all those who know them, but if one is fortunate in locating a pair with young still in the nest, a good view of both old birds is assured, for one may then hide within two or three yards of the nest and after a few moments the birds will almost cease "scolding" and resume their feeding operations. Large and small moths, butterflies, "daddy-long-legs," spiders, and larvæ of many kinds, principally one of a vivid green colour, are brought in large numbers by both birds at frequent intervals, but the female is the more active and will sometimes make two journeys to every one made by the male, who occasionally bursts into song until driven off to his parental duties by the female. The sexes are easily distinguishable, the male being larger and more brightly coloured and having darker legs than the female. Sometimes the mandibles are so loaded with food that the alarm-note becomes almost inaudible and ludicrous.

Another favourable time for watching these birds is while they are building. Materials are brought at

intervals of a minute to a minute and a half, and the birds are silent and apparently quite indifferent to being watched. If, however, a nest containing young birds or highly incubated eggs is approached, both old birds become very noisy and demonstrative. On one occasion I saw a female leave a nest containing young and drop on to a path with outspread wings and tail in an endeavour to draw us away. This habit has already been recorded by Mr. Howard Bentham (Vol. III., p. 186), and is of course common in other birds. Should the clutch of eggs be incomplete or incubation not have commenced, the birds are very silent and often not in evidence at all, the female slipping off the nest without making an alarm-note. The general behaviour at the nest is characteristic of many other species under similar conditions, and the same remark applies to the habit of soaring upwards for a few yards and sometimes hovering for a second or two before dropping, like a stone, on or into the furze or ling.

I consider that Dartford Warblers are stronger on the wing and take longer flights than is generally supposed, and on several occasions I have seen them fly several hundred yards right across a valley.

The breeding-season is very erratic and depends to a great extent on climatic conditions. In 1913 they were earlier than usual, fully-fledged young being found on May 3rd, and fresh eggs as late as June 21st (possibly a second laying). May is apparently the favourite month. The nest is comparatively easy to locate when once the bird has been marked down, indiscriminate searching being practically useless, though I have three times flushed a bird from the nest quite unexpectedly. There is no very serious attempt at concealment in most cases, especially when the nest is in ling, though it is not always possible to see it from directly above, but when placed in furze it is not so easily detected. When in ling, for which the birds show a distinct preference, the nest is from 6 in. to $1\frac{1}{2}$ ft. from the

ground, when in furze $1\frac{1}{2}$ to 5 ft., the latter height being exceptional. I have never seen a nest in very thick furze, the favourite site being in a small piece of furze through which there is growing ling, goose-grass, and other herbage, and in some cases bracken.

Many so-called "cocks' nests" are built, but whether these are ever used for roosting purposes, or as protection during cold weather, I cannot say; they are easily distinguishable from the nests used for breeding purposes, and as a rule are built entirely of goose-grass and are unlined.

The fifty to sixty nests which I have very carefully examined have been well built, firm, and compact: only two or three could really be termed flimsy; and some were so well built that light was scarcely visible through them. They are very characteristic and not easily confused with those of any other British breeding bird, and I do not agree with those writers who maintain that they resemble nests of the Common Whitethroat. Most of those who have described the nest apparently had very little material for comparison, and some of the descriptions are obviously misleading. In a series of sixteen nests I find no less than twenty-four distinct plants, grasses, and other materials made up as follows, the position in the nest occupied by the materials being denoted thus: A outside, B intermixed, C lining.

Used abundantly.—Goose-grass, A, B; grass, two species of *Agrostis*, A, B, C; ling (*Calluna vulgaris*), A, B; moss (*Hypnum cupressiforme*), A, B; feathers, A, B, C; grass, flowering heads (*Aira flexuosa*), A, B, C; grass roots with rootlets adhering, B.

Used sparingly.—Dwarf furze (*Ulex nanus*), A, B; ground-lichen (*Cladonia gracilis*), A, B; spiders' egg-cases, two species unidentified, A; ling and grass rootlets, C; thistle-down, unidentified, A; bents of two plants, unidentified, A, B; horsehair, cowhair, C.

Used once only.—Duck's down, A ; rabbit's fur, B ; dodder (*Cuscuta epithymum*), C ; willow-down (*Salix repens*), B, C ; bracken (*Pteris aquilina*), B.

The dwarf-furze (not the common species) and ground-lichen are distinctive features in these nests, and I know of no other Passerine bird that makes use of them. Feathers are much more used than is generally supposed,* and with the egg-cases of one species of spider appear to serve the purpose of binding other materials together.

The white and conspicuous egg-cases of another species of spider are, however, apparently used for decorative purposes, and are placed on the outside. These are sometimes adhering to pieces of ling, but I have also seen them brought separately to the nest. Some nests, and usually those in ling, are made entirely of ling and lined with feathers, hair, and rootlets. Wool is quite absent from all the nests examined.

Measurements of nests : Diameter across the top, 3-4 in., ditto, inside, 2 in. ; depth outside $2\frac{1}{4}$ - $2\frac{3}{4}$ in., ditto, inside, $1\frac{1}{2}$ -2 in. ; thickness of wall at top, $1\frac{1}{2}$ in.

The fæces of the young and adults are curious and distinctly rose-pink in colour. These are removed immediately from the nest, which is always beautifully clean, and it is difficult to distinguish between a nest from which young have flown and a new one. The young bird when first hatched is very dark and black-skinned, the inside of the mouth is orange-red, paler towards the edges, and there are two black tongue-spots.

The eggs cannot easily be confused with those of any other British breeding bird. Although they very slightly resemble one of the commoner types of the Common Whitethroat, there is something very distinctive about them to the practised eye, and they are on the average smaller and do not show so much gloss. I have

* I find them in ten out of sixteen nests and in one nest pulled to pieces for examination there were no less than forty-seven feathers.

divided them into two distinct types—one with white and the other with greenish-white ground-colour.

TYPE A.

Surface of shell white, markings pale olive-brown evenly distributed, but usually denser at the large ends, underlying markings lead-grey in various shades, mostly confined to large end, extreme ends are sometimes devoid of pigment; general appearance distinctly smoky, shape mostly narrow pointed ovals, though broad ovals occur. Texture, distinctly finer grained than those of the Common Whitethroat, and there is an absence of pittings.

TYPE B.

Surface of shell greenish-white, markings dark olive-brown to pale brown, mostly confined to large end, forming dark caps or zones, and distinctly sharper and more spotted in appearance than in type A; underlying markings, shape, and texture same as A. This is the commoner type.

There is very little pronounced variation, the two types being constant and well set, and aberrations rare. I have a clutch which is very boldly marked and clouded, one of the four eggs being pure white with a few underlying marks at the large end only; another egg in a clutch of four has a clouded zone of very thick pigment at the large end, with a band almost unpigmented round the centre. Erythrism is said to occur, but I have never heard of an erythristic clutch having been found in this country, and I have not yet met with a well-known collector who has found one on the Continent. Further confirmation on this point is necessary from reliable sources. Some of the clutches from the Continent I am inclined to think must be attributed to the Sardinian Warbler. The egg figured by Seebohm is not typical, nor I think are two of those figured by Dresser (Nos. 43 and 47). The full clutch generally consists of four eggs, sometimes three only. I have only seen five clutches of five.

As an illustration of how easily these skulking little birds may be overlooked, I may mention that on one occasion I remained for two days on one fairly large common without seeing or hearing a bird, but on the third day, on the same common, I discovered no less than five pairs with young.

Whether there has been any marked increase in the species I am not prepared to affirm or deny, but in any case they are now quite abundant. This may be owing to successive mild winters; but I think it is more probably a question of knowing the birds and where to look for them. For instance, in three of the localities in which I have found them they were supposed to have been exterminated by collectors; but those who know these exceedingly cunning birds will dismiss such a suggestion as mere hearsay. Furze fires are no doubt at times responsible for diminution, and I knew of one case where two nests with eggs, and possibly the birds, were destroyed in this way.

It has, I think, been stated by some writers that the Dartford Warbler preferred a sandy soil, and at one time I also held this opinion, but I have since found the bird on heavy clay soils and even comparatively marshy ones.

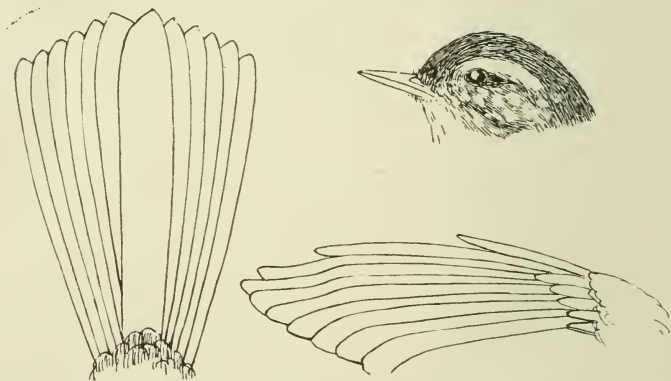
THE DUSKY WARBLER IN ORKNEY.

A NEW BRITISH BIRD.

MR. W. EAGLE CLARKE writes to the *Scottish Naturalist* (1913, pp. 271-3) that during the past autumn he and Dr. C. B. Ticehurst with George Stout were observing migration on Auskerry (Orkneys), and that on October 3rd, 1913, a strange warbler was detected and eventually secured. This proved to be a female example of the Dusky Warbler (*Phylloscopus fuscatus*) which breeds in Siberia and winters in India, China, and Japan. This far-eastern species is certainly a remarkable addition to the British List, and it does not appear to have been taken before in Europe, though Gätke thought he saw one on Heligoland on October 24th, 1876.

We give below a full description of this new British warbler, and also some notes regarding its habits which have been kindly contributed by Mr. E. C. Stuart Baker.

DESCRIPTION.



Phylloscopus fuscatus (nat. size).

Adult male and female.—*Winter.*—Fore-head, crown, mantle, scapulars, and wing-coverts dark olivaceous-brown (often slightly tinged rufous); rump rather paler; upper tail-coverts more rufous; lores and behind eye dark-brown;

superciliary-stripe (from nostrils to nape) rufous-buff, paler in front of eye; ear-coverts and sides of neck same, mottled dark brown; centre of throat and belly whitish; sides of throat, breast, and under tail-coverts rufous-buff; flanks darker washed greenish-brown; axillaries and under wing-coverts bright pinkish-buff; tail and wing-feathers dark brown with the outer webs more rufous, fringed very pale pinkish-buff on inner webs and narrowly fringed pale buff on the outer webs of the outer primaries. This plumage is acquired by complete moult in September or October. *Summer*.—The body-feathers and inner secondaries are moulted in March and April but apparently not the tail and rest of the wing-feathers. Coloration as in winter.

Nestling Down.—Unknown.

Juvenile.—Much resembling adults but greyer on breast, not so buff on flanks, eye-stripe and ear-coverts greyer, not so buff. All the body-feathers of a very loose structure.

First-winter male and female.—Resembling adults but more yellowish on the centre of the throat and belly and a yellowish rather than rufous tinge on the rest of the under-parts. The juvenile body-feathers are moulted in August but apparently not the wings and tail. *Summer*.—Like the adults and moult the same.

Measurements and structure.—♂ wing of twelve 57-66 mm., tail 44-53, tarsus 20-22, bill from skull 12-13. ♀ wing 53-61. First primary about twice primary-coverts and half second primary, second between eighth and tenth (very seldom so long as eighth), fourth and fifth about equal and longest, third and sixth 1-3 mm. shorter, seventh 5 shorter, eighth 7 shorter. Third to sixth emarginated on the outer webs. Secondaries equal to the tenth primary. Bill fine; a few longish rectal bristles.

Soft parts.—Bill: upper mandible dark brown, lower yellow; legs and feet yellowish-flesh; iris dark brown.

Characters.—The long first primary, rufous-buff eye-stripe and under-parts and dark flanks are distinctive.

H. F. WITHERBY.

HABITS.

Whether the Dusky Warbler ever remains to breed in any of the higher eastern Himalayas or the high mountain ranges of west central China is not certain, but there is, in any case, no doubt that the nest and

eggs attributed to it by Jerdon, and described in Hume's *Nests and Eggs of Indian Birds*, are really those of some other bird.

In the lower ranges of the Himalayas *Phylloscopus fuscatus* arrives about the middle of September and after this date spreads rapidly throughout the foothills and into the plains. Its return migration does not appear to commence until the end of March, and during this month it is exceedingly common about Calcutta. After March few individuals are to be found in the plains, but it is still common on the foothills throughout April and stragglers stay on until well into May.

In its habits it is a curious mixture of excessive activity and lethargy. During the greater part of the day it restlessly pursues its insect-food, scrambling up and down bushes and trees, from the lowly scrub to the tops of lofty trees, hunting each bough and branch above and below, twisting like a titmouse or tree-creeper from one point to another, or occasionally fluttering into the air, more like a flycatcher or warbler of the *Cryptolopha* group, after some insect it has disturbed from its hiding-place.

In the heat of the day, however, it rests on a branch of some tree, generally over rather than under twenty feet from the ground. Here it sits with its feathers puffed out and its head drawn back between its shoulders—not tucked under its scapulars—and dozes away the hours. At these times it is very loth to move and if disturbed and forced to fly either returns at once to its former perch or selects one close at hand, where it once more relapses into quietude.

Its note is very much like that of the Chiffchaff, but I noticed that the birds which haunted my garden in North Cachar had also another note, a very low soft “chi-chirree” twice or three times repeated, which reminded me very much of the call of the Little Red-breasted Flycatcher.

E. C. STUART BAKER.

The following is a free translation from the German of Dybowski's account of the breeding-habits of *Ph. fuscatus* (*J. f. O.* 1872, p. 357):—

The spring passage of this bird takes place in the last days of May, and it is found in considerable numbers throughout the whole summer in the district south-east of Lake Baikal, inhabiting valleys overgrown with low scrub or woods on the sides of the lower hills, especially those which border swamps. Soon after its arrival one hears its monotonous song which resembles the syllables "Tsius-tsius-tsius."

The nest is built on hillocks overgrown with high grass or in bushes, generally in one close to running or stagnant water, and is either close to the ground or else about eighteen inches above it. The nest is domed, with a side entrance. The material used is dry grass mixed with some moss, and lined with a quantity of feathers. The grasses used are much finer than those employed by the Chiffchaff. About the middle of June the female lays five or six pure white eggs, without gloss, and usually more or less distinctly pointed in shape, measuring 18×12.5 mm.; 15.3×12 mm. The hen sits very closely and usually only leaves the nest when the grass or scrub among which the nest is placed is disturbed, when she is joined by the male, attracted by her cries. If one withdraws for a few paces she returns at once to the nest. Cuckoos' eggs are frequently deposited in the nests of this species. In autumn they remain to mid-September, but single individuals are also seen up to October.

The species should be added to the *Hand-List* as follows:—

128a. *Phylloscopus fuscatus* (Blyth). — THE DUSKY WARBLER.

PHYLLOPNEUSTE FUSCATA Blyth, Journ. As. Soc. Bengal, XI, p. 113 (1842—Calcutta).

Phylloscopus fuscatus (Blyth), Clarke, Scot. Nat., 1913, p. 271.

DISTRIBUTION.—*Scotland*.—One, a female, Auskerry (Orkney), Oct. 3, 1913 (*ut supra*).

DISTRIBUTION.—*Abroad*.—Breeds from Yenisei eastward to Sea of Okhotsk, and from Mongolia and Manchuria northwards, probably to about lat. 64° N. On migration, occurs in China, Japan and Mongolia, wintering in Formosa, south China, Burma, Assam, Nepal, Tenasserim, and plains of northern India.

RECOVERY OF MARKED BIRDS.

- STARLINGS (*Sturnus v. vulgaris*).—41513, 41526, 41539, 46201, 46284, 46310, 46314, 46363, 46375, immature, marked by Mr. W. E. Suggitt, at Cleethorpes, Lincolnshire, during July and August, 1913. Recovered during November and December, 1913, from near Liverpool, near Blackpool, co. Kilkenny, and from Cleethorpes and Great Grimsby. Several adults marked by Mr. W. E. Suggitt at Cleethorpes in September and October, 1913, recovered at the same place from October to December, 1913.
- LINNETS (*Carduelis c. cannabina*).—0555, nestling, marked by Mrs. Patteson at Limpsfield, Surrey, on May 26th, 1913. Reported by Mr. R. Teague near Eastbourne, Sussex, on October 14th, 1913. 053, nestling, marked by Dr. H. J. Moon at The Fylde, Lancashire, on May 25th, 1913. Reported by Mr. J. Jeavons at Pensnett, Dudley, Worcestershire, on November 2nd, 1913.
- MEADOW-PIBIT (*Anthus pratensis*).—Q811, nestling, marked as 053, on July 4th, 1913. Reported by M. A. de Gorostarzer at St. Vincent de Tyroese, near Bayonne (Landes), France, on October 10th, 1913.
- MISTLE-THRUSH (*Turdus v. viscivorus*).—43599, nestling, marked by Mr. C. Hyslop (gamekeeper to Mr. H. S. Gladstone) at Thornhill, Dumfriesshire, on May 22nd, 1913. Reported by M. A. Bouillon at Briquebort (Manche), France, on November 9th, 1913.
- BRITISH SONG-THRUSH (*Turdus p. clarkei*).—44000, nestling, marked by Dr. H. J. Moon at The Fylde, Lancashire, on May 25th, 1913. Reported by Prof. Jules Welsch at Les Sables d'Olonne (Vendée), France, on November 2nd, 1913.
- BLACKBIRD (*Turdus m. merula*).—10497, nestling, marked by Mr. J. Bartholomew at Torrance, near Glasgow, Stirlingshire, on June 7th, 1910. Recovered at the same place on November 9th, 1913.
- TEAL (*Anas c. crecca*).—64613, marked by Mr. W. Meech (per Lord William Percy) at Alnwick, Northumberland, on August 16th, 1913. Recovered at the same place at end of October, 1913. 8635, adult female, marked by the Hon. Gerald Legge at Patshull, Wolverhampton, Staffordshire, on December 30th, 1912. Reported by Mr. A. P. Oudclaur at Scheveningen, Holland, at the beginning of December, 1913.
- TUFTED DUCK (*Nyroca fuligula*).—33468, young, marked by Mr. W. Meech (per Lord William Percy) at Alnwick, Northumberland, on August 19th, 1913. Reported by Mr. J. P. Carrick four miles north-west of Brampton, Cumberland, on September 23rd, 1913.
- CORMORANTS (*Phalacrocorax c. carbo*).—50686, 50670, 50715, 50642, 50374, 50665, marked by Mr. R. M. Barrington on Saltee Islands, co. Wexford, in June, 1913, as nestlings. Recovered in October and November, 1913, in counties Longford, Wexford, Londonderry, Down, Antrim, and Argyllshire. 100621, 100631, 100644, 100645, 100650, 100656, 100669, 100672, 100674, 100683, 100690, 100692, 100695, marked by Miss A. Pease on Farne Islands, Northumberland, on August 2nd, 1913, as nestlings. Recovered from October to December, 1913, in Fifeshire, Northumberland, Morecambe Bay, Carmarthen, Glamorgan, Devonshire, Cornwall, Isle of Wight and Brittany.

- GANNETS (*Sula bassana*).—100108 and 100094, nestlings, marked by Mr. J. M. Campbell on the Bass Rock, on August 22nd, and September 30th, 1913. Recovered near Berwick-on-Tweed, Northumberland, on October 5th and 18th, 1913.
- WOOD-PIGEON (*Columbus p. palumbus*).—22523, nestling, marked by Mr. H. W. Ford-Lindsay at Pett, Sussex, on June 15th, 1913. Reported by Mr. T. Eldridge at Guestling, near Hastings, Sussex, on November 28th, 1913.
- TURTLE-DOVE (*Streptopelia t. turtur*).—Q217, nestling, marked by Mr. W. W. Grant at Christchurch, Hampshire, on August 9th, 1913. Reported by Mr. W. C. Tait at Torrao da Lameira, Portugal, in September, 1913.
- LAPWINGS (*Vanellus vanellus*).—44007, nestling, marked by Miss S. M. Heysham on Rockcliffe Marsh, Carlisle, Cumberland, on May 25th, 1913. Reported by Messrs. Rule Bros., at the mouth of River Sark, Dumfriesshire, on October 14th, 1913.
- 15533, nestling, marked by Mr. R. O. and Miss A. Blyth at Inverkip, Renfrewshire, on July 9th, 1912. Reported by the *Shooting Times* near Athlone, co. Westmeath, at end of November, 1913.
- B.B. No. 18582, nestling, marked by Mr. and Miss Blyth at Loch Thom, Renfrewshire, on June 26th, 1913. Reported by Mr. J. Malone at Herbertstown, co. Limerick, on November 21st, 1913.
- SNIFE (*Gallinago g. gallinago*).—E978, nestling, marked by Mr. J. Steele Elliott, at Sandy, Bedfordshire, on May 2nd, 1912. Reported by Mr. B. H. T. Frere at South Walsham, Norfolk, on November 7th, 1913.
- WOODCOCK (*Scolopax rusticola*).—19440, nestling, marked by Miss S. M. Heysham at Castletown, Carlisle, Cumberland, on May 9th, 1913. Reported by Mr. E. C. B. Dale at Stocksfield, Northumberland, on October 27th, 1913.
- 25339, nestling, marked by Mr. H. S. Gladstone at Lann, Dumfriesshire, in May, 1912. Reported by Lord Henry Scott at Drumlanrig, Dumfriesshire, on November 13th, 1913.
- 25359, nestling, marked by Mr. A. Tait (gamekeeper to Mr. H. S. Gladstone) at Drumlanrig, Dumfriesshire, on May 2nd, 1912. Reported by Lord Henry Scott at the same place on November 26th, 1913.
- 42026, marked as 25359 by Mr. J. Hitt (gamekeeper to Mr. H. S. Gladstone), on June 3rd, 1913. Reported by Mr. G. Russen on the Ross Barony, Dumfriesshire, on November 17th, 1913.
- 25547, nestling, marked by Mr. J. D. Patterson at Goathland, Yorkshire, on April 27th, 1913. Reported by *La Chasse Illustrée* at St. Eulalie-en-Born (Landes), France, on November 16th, 1913.
- COMMON TERN (*Sterna hirundo*).—20116, nestling, marked by Messrs. W. H. Robinson and F. W. Smalley at Ravenglass, Cumberland, on July 14th, 1910. Reported by Mr. T. Hart near Huelva, Spain, on October 28th, 1913.
- BRITISH LESSER BLACK-BACKED GULLS (*Larus f. affinis*).—31069, nestling, marked by Messrs. Robinson and Smalley at Foulshaw, Westmorland, on June 24th, 1910. Reported by Mr. E. L. Burchell at Huelva, Spain, on March 19th, 1911.
- 9934, nestling, marked by Mr. H. W. Robinson at Foulshaw, Westmorland, on June 25th, 1913. Reported by Sr. Berasalver at Huelva, Spain, on December 8th, 1913.

33864, nestling, marked by Miss A. Pease at Farne Islands, Northumberland, on August 2nd, 1913. Reported by Mr. N. H. Joy at Brancaster, near King's Lynn, Norfolk, about October 20th, 1913.

33861, marked as 33864. Reported by Mr. W. C. Tait at Peniche, Portugal, on October 16th, 1913.

33866, 33908, 33959, marked as 33864. Recovered during November, 1913, on the River Douro, at Villa Nova de Gaya, near Oporto, Portugal.

33976, marked as 33864. Reported by Mr. W. C. Tait on the River Tagus, Lisbon, Portugal, about November 22nd, 1913.

33912, marked as 33864. Reported by Mr. R. Sampson off Cape Juby, south-west Morocco, on November 13th, 1913.

MARKED ABROAD AND RECOVERED IN ENGLAND.

LAPWING (*Vanellus vanellus*).—Rossitten No. 18302, nestling, marked at Udenküll, near Hapsal, Estland, Russia, on June 2nd, 1913. Reported by Mr. J. S. Allison at Alvingham, near Louth, Lincolnshire, on November 11th, 1913.

COMMON TERN (*Sterna hirundo*).—Heligoland, No. 16348, nestling, marked at Trischen (Mouth of Elbe), on July 19th, 1913. Reported by Mr. K. J. A. Davis at Blakeney Point, Norfolk, on September 16th, 1913.

BLACK-HEADED GULLS (*Larus ridibundus*).—Rossitten, No. 18278E, nestling, marked near Lubeck, Schleswig-Holstein, on June 21st, 1913. Reported by Mr. H. Town in the *Shooting Times* at Crassington, Yorkshire, on August 18th, 1913.

Rossitten, No. 18202E, marked as 18278E. Reported by Mr. A. W. Wright in the *Shooting Times* at Hornsey, North London, on August 27th, 1913.

Rossitten, No. , nestling, marked on the Isle of Fehmarn, off the east coast of Schleswig-Holstein, on July 11th, 1913. Reported in the *Field* as recovered at Cefn Mably, Monmouthshire, on September 26th, 1913.

Rossitten, No. 17899E, nestling, marked near Wendisch-Langendorf, Pomerania, on July 8th, 1913. Reported by Mr. J. C. Dalton in the *Shooting Times* near Sandwich, Kent, on September 20th, 1913.

Rossitten, No. 11511, marked as 17899E on June 29th, 1913. Reported by Mr. H. Gibson Poole at Gravesend, Kent, on November 2nd, 1913.

COMMON GULL (*Larus canus*).—Kielkond, Russia, No. 67, nestling, marked at Kielkond, on the Island of Oesel, Gulf of Riga, on July 18th, 1911. Recovered on the River Severn, nine miles below Gloucester, on November 14th, 1913. Reported by Mr. H. W. Robinson, who has kindly obtained the above information from Russia.

NOTES

UNUSUAL BIRDS AT DUNGENESS.

I WAS at Dungeness from October 20th to 23rd, 1913, and a great deal of migration was proceeding at the time, chiefly of flocks of finches and other birds flying south in the early morning.

Between 12 noon and 1 p.m. on the 20th I saw a party of thirteen Sooty Shearwaters (*Puffinus griseus*) fly south-west past the point, not far out to sea. The same afternoon I saw a Firecrest (*Regulus ignicapillus*) in the bushes.

On the 20th and 21st there were at least five Black Redstarts (*Phoenicurus o. gibraltariensis*) near the lighthouse; on the 22nd only one was left, and on the 23rd I saw none.

On the 21st I saw a bird that I have little doubt was a Continental Great Tit (*Parus m. major*) just arrived from the east, but my attempts to ascertain the geographical race of the Goldcrests (*Regulus regulus*) seen each day were unsuccessful. I also saw an extremely dark Lesser Black-backed Gull (*Larus f. fuscus* (?)) on Littlestone shore on the 21st, near a much paler one.

On the 23rd I saw a duck fly past the point, which from its remarkably brown wings I concluded was a Long-tailed Duck (*Clangula hyemalis*), the other colours also appearing suitable.

H. G. ALEXANDER.

DIMINUTION OF STARLINGS.

CONFIRMING Mr. E. W. Wade's letter (*antea*, p. 178) on this subject, it certainly struck me that far fewer Starlings nested here this year than last, although I happened to be able to examine more nests myself. I was also struck by their early flocking and consequently fewer second broods. It may be of interest to state that this year I found forty-one young Starlings in fourteen nests, in 1912 sixteen young in five nests, and in 1911 twenty-eight young in nine nests, giving an average of almost exactly three in each nest. In twenty-eight Swallows' nests I examined this year there were one hundred and twelve young birds, in 1912 in eighteen nests there were sixty-eight young birds, and in 1911 in fifteen nests were sixty-one young birds, an average of almost exactly four in each nest.

JOHN R. B. MASEFIELD.

SISKINS IN ANGLESEY.

THE Siskin (*Carduelis spinus*) has rarely been noticed in Anglesey. On the morning of October 9th, 1913, some thirty birds were feeding on seeding knapweed on a bank at the edge of Holyhead harbour. They rose in a twittering crowd on being disturbed, but after a short flight returned to the bank again. Their occurrence in this bare and treeless district, so uncongenial to the Siskin's usual habits, suggested that the birds were newly-arrived migrants. It seemed likely, too, that other species had made an oversea passage during the night, for there were many Goldcrests in the gorse bushes at the harbour's edge and several Bramblings, associated with Chaffinches, in the woods at Penrhos, three miles away.

CHAS. OLDHAM.

MEALY REDPOLL IN LEICESTERSHIRE.

IN Mr. Montagu Browne's *Vertebrate Fauna of Leicestershire* there is no mention of the Mealy Redpoll (*Carduelis l. linaria*) as occurring in the county. Though, no doubt, an uncommon winter-visitor, I feel sure it must occur occasionally among the migrant flocks of Lesser Redpolls which regularly visit us, and as a confirmation of this I saw on November 18th, 1913, a pair of these birds caught by a Hinckley bird-catcher on November 9th, on a farm at Shenton, six or seven miles from Burbage, Leicestershire, with some Lesser Redpolls.

STEPHEN H. PILGRIM.

SHORE-LARK IN BEDFORDSHIRE.

DURING the last week of October, 1913, a mature cock Shore-Lark (*Eremophila a. flava*) was caught on the Dunstable Downs, in Bedfordshire. The bird was trapped with a number of common Sky-Larks. No others of the species were observed. When I saw the bird it was doing well in a large cage, eating mostly canary-seed. It seemed to be getting tame very quickly.

W. ROWAN.

GREY WAGTAIL BREEDING IN HAMPSHIRE.

SINCE the publication of the *Birds of Hampshire* (in 1905) the Grey Wagtail (*Motacilla b. boarula*) has so increased as a breeding species in Hants, that it may now be considered a resident pretty generally distributed throughout the county in suitable localities, whereas it was formerly only very local in its distribution. Very few of the mills on the Hampshire streams are without a pair of these birds nesting in their vicinity.

PHILIP W. MUNN.

PIED WAGTAILS REARING TWO BROODS
IN ONE NEST.

ON May 9th, 1913, I found a nest of the Pied Wagtail (*Motacilla a. lugubris*), situated in a bridge spanning the river Blythe, near Hampton-in-Arden, Warwickshire, a situation in which a pair has bred for several years. On this date it contained four newly-hatched young and an addled egg; these young had flown by May 25th, and happening to look into the nest on July 27th I was surprised to find a second brood of four well-feathered young.

A. GEOFFREY LEIGH.

[As this habit appears to be rather uncommon in the case of the Pied Wagtail, I may here record two instances which have come under my observation. In June, 1911, in some creepers growing over the porch of a house in Burley, Hampshire, there was a Pied Wagtail's nest with five eggs, one of which was that of a Cuckoo. When next examined the nest contained only a young Cuckoo two or three days old. The next day, June 22nd, the Cuckoo was found to be dead, although the Wagtail was sitting on the nest. The dead Cuckoo was removed. On July 15th the bird was sitting on five of her own eggs in the same nest, which so far as I could see had not even been relined, and the young were eventually reared.

In 1912 there was a Wagtail's nest within eight yards of the 1911 site, and probably the pair of birds were the same. A brood of four was reared, and shortly after they were fledged the nest was relined and the bird laid again. A Cuckoo was searching about in the neighbourhood of the nest on several days, and eventually a Cuckoo's egg was found in it. On June 28th the young Cuckoo was alone in the nest and in due course it fledged.

Another case in which two broods were reared from the same nest is recorded by Mr. S. J. R. Dickson in *Country Life* (19.VII.1913).—H. F. WITHERBY.]

CURIOUS BEHAVIOUR OF A YOUNG WHITETHROAT.

ON June 12th, 1913, while watching, at close quarters, a young but fully-fledged Whitethroat (*Sylvia c. communis*), one of the parent birds came out of the hedge close to me, dropped to the ground almost at my feet and fluttered slowly and with seeming helplessness away, presumably feigning injury in an effort to distract attention from its offspring. I continued to watch the young bird which was perched on a slender twig in a thick part of the hedge. In

about a minute it began to fall slowly forward until nearly upside-down, being supported by only a twig under the chin (the head being consequently bent right back) and by its feet, with which it never let go. It made not the slightest effort to save itself and when I re-passed the spot (after having moved away) some moments later was in exactly the same position. I stretched out my hand to rescue it from a most uncomfortable, if not fatal, position, but before I could touch it it dropped to the ground (only a few inches) and thence flew capably away into the middle of the hedge.

Was the bird obeying injunctions from its parents not to move when in the face of danger except as a last resource, or did the close and continued staring to which it was subjected cause it for a while to lose control of its limbs, a control which was only regained owing to the additional fright given by the proximity of my extended hand?

LEWIS R. W. LOYD.

BLACK REDSTARTS IN LINCOLNSHIRE AND NORTHUMBERLAND.

MR. G. H. CATON HAIGH informs me that he shot a Black Redstart (*Phœnicurus o. gibraltariensis*) on the north-east coast of Lincolnshire, on October 13th, 1913. It is very rarely met with in Lincolnshire, and I only know of about four records, all in the month of October.

F. L. BLATHWAYT.

[It is rather strange that the Black Redstart is not more frequently seen on the Lincolnshire coast, but this may be for want of observers, as the bird is a fairly regular passage-migrant at Spurn, on the north side of the Humber, and in Norfolk. I may here record that an adult male was obtained at Holy Island, Northumberland, on November 5th, 1913, and sent to me in the flesh. I saw one at the same place on October 11th, 1912, but there are only some five previous records for Northumberland, though this apparent rarity may be due, to a certain extent, to want of observation.—H. F. WITHERBY.]

BREEDING OF THE DIPPER IN WILTSHIRE.

WHILE on a visit to Lacock in north Wiltshire (about twelve miles east of Bath) Mr. G. Pullen was shown a nest and four eggs of the Dipper (*Cinclus c. britannicus*) on June 11th, 1913, built on a ledge of a culvert over a brook. The birds were seen several times by Mr. Pullen, who is familiar with the species in Derbyshire. He was informed that another

clutch of eggs had been laid earlier in the season, and that no birds of this species had been noticed in the locality in former years. A. C. Smith's *Birds of Wiltshire* contains no reference to the breeding of the Dipper in the county, but Mr. G. B. Hony informs me that the *Wills. Arch. & Nat. Hist. Magazine*, Vol. 33, contains a note on the nesting of the Dipper at Castle Combe, near the Gloucester border and about seven miles to the north-west of the present locality in direct line.

F. C. R. JOURDAIN.

RING-OUZEL AS FOSTER-PARENT OF CUCKOO.

WITH regard to the above subject (*antea*, p. 175), it may be of interest to record that I found the egg of a Cuckoo in a Ring-Ouzel's nest on June 25th, 1899, on Stow Hill, not far from Brampton Bryan, but within the Shropshire boundary. The nest also contained two Ring-Ouzel's eggs and a newly-hatched young one.

F. L. BLATHWAYT.

CUCKOO DEPOSITING EGG AMONG INCUBATED EGGS.

WITH reference to Mr. J. H. Owen's note on this subject (*antea*, p. 54), two similar incidents came under my notice during 1912. In Surrey, on May 11th, I discovered a fresh egg of the Cuckoo in the nest of a Meadow-Pipit. The three eggs of the foster-parent were so highly incubated that feathers had developed in the embryo, but by the condition of the eggs I judged they had been forsaken some time. At Ashford, Kent, on May 31st, I found a fresh egg of a Cuckoo among five of the Robin. The young birds in the eggs of the foster-parent were again almost fully developed and must have hatched a day or two later.

My experience has been that the Cuckoo deposits its egg in a nest at a time when those of the foster-parent number one to three, but seldom when there are more. When the egg is deposited among incubated eggs of the foster-parent, the Cuckoo may perhaps have been unable to find another nest.

H. R. TUTT.

COURTING HABITS OF THE CUCKOO.

ON April 23rd, 1913, I spent some time watching a female Cuckoo (*Cuculus c. canorus*) which was sitting in a conspicuous position on a post which formed part of a fence round the top of a long-disused quarry. In due course a cock-bird made his appearance, not without giving due warning, and quickly "spotting" the hen settled at her side. He remained there only for a moment or two, thereafter making frequent

flights to distances of up to about a hundred yards, settling on the top of some convenient bush and there "spreading himself out," jerking up and down, and "cuckoo-ing" for all he was worth. The moment the hen made the slightest movement he flew straight back to her, to remain, however, for a few seconds at most before hurrying away to make further exhibition of himself and his song. For fully a quarter of an hour these tactics were continued, some movement of mine eventually putting the birds to flight.

I observed that when at his mate's side the cock-bird frequently gave vent to a sound which I can best liken to the first note of the Wood-Pigeon, the "take" of the familiar "take two cows Taffy."

LEWIS R. W. LOYD.

FOSTER-PARENTS OF CUCKOO.

In reference to the notes on this subject (*supra*, p. 175), perhaps the following may be of sufficient interest to warrant its being placed upon record now, as it would seem to add considerable weight to the doubts sometimes expressed, as to whether the mere fact of a young Cuckoo being seen to be fed by a certain bird, is sufficient evidence upon which to assert that that bird is its foster-parent. This incident took place near Ilkley, Yorkshire, on August 22nd, 1909, my sister and I being the spectators, and I extract from what was written at the time in my journal. "At the farm above Tivoli (Middleton) we saw three young Cuckoos, all together, flitting about and perching on walls, trees, rails, gates, etc., often close together and sometimes very close to us. They seemed naturally inclined to keep together and were attended by (or at any rate associated with) a little flock of Meadow-Pipits, six or eight maybe in number, several of which fed the Cuckoos from time to time. This they seemed to do quite promiscuously; certainly the same Pipit fed different Cuckoos, for this I saw distinctly; and, though it was not possible to keep a close watch on all, I am pretty sure that two or three at least of the Pipits fed any one of the Cuckoos which chanced to come near them. We watched the birds for a long time, and during that time a Robin was seen to feed one of the Cuckoos once, and several Thrushes, which were about, seemed to take a very kindly interest in them, and I believe, fed them more than once. However, once at least, a Thrush was distinctly seen to feed one of them with a large mouthful of what appeared to be pieces of a large worm. The Cuckoos were well fledged, all of, apparently, the same age, but their tails were not quite full grown, though all flew well and easily. We did

not see any of them make any attempt to find food for themselves, except by keeping a close eye on the other birds, and vieing with one another as to who should receive it; and the Pipits looked just like one of those little roving bands one so commonly sees at this time of the year. We saw several of such bands during the afternoon, and it was especially remarked that not one of those birds attendant upon the Cuckoos seemed to take more than a casual interest in them. No Pipit showed anything of that alarm when we approached a Cuckoo that "mother" Pipits generally do. I really very much doubt whether any of them had actually brought up a Cuckoo, or any one of them, and obviously no Pipit could have brought up more than one, though, as above stated, one Pipit was seen to feed more than one Cuckoo. Then the Thrushes and Robin could hardly have any connexion with them, and a Cuckoo eating worms is unusual! What it was that the Robin and the Pipits brought we could not see as I had no glasses. Once the food brought by a Pipit appeared to be a Crane-fly."

While upon the subject, I might add, with reference to one of the last observations, that I have since that date had proof that adult Cuckoos will, occasionally at any rate, feed upon worms. In *Country Life* of May 17th, 1913, I described how, on two occasions during very inclement weather that month, I watched old Cuckoos catching and swallowing worms.

GEORGE BOLAM.

[Mr. Bolam's observation is very interesting, but it seems to us quite possible that the three Cuckoos were hatched in three Meadow-Pipits' nests within a restricted area, and after fledging kept together. The evidence against the Pipits being the real fosterers seems to us weak, but the occasional feeding of the Cuckoos by Robins and Thrushes, in any case, confirms a good many previous observations which show that other birds will occasionally assist a fosterer in its task. Durham Weir informed Macgillivray that he saw a Meadow-Pipit feed a young Cuckoo with snails and mouthfuls of large worms, some of which were more than three inches in length. (*Hist. of Br. Birds*, III., p. 130).—Eds.]

CUCKOOS' EGGS AND NESTLINGS IN 1913.

THE following notes are based on observations made, with two or three exceptions, in the neighbourhood of Felsted, Essex. Altogether twenty-nine eggs or young Cuckoos (*Cuculus c. canorus*) were met with in the course of the

season, and in every case but one the foster-parents were ascertained as follows :—

Foster-Parents.		Number of Cases.		Percentage.
Hedge-Sparrow	15	53.5
Pied Wagtail	4	14.2
Sedge-Warbler	3	10.7
Redbreast	2	7.1
Linnet	2	7.1
Reed-Warbler	2	7.1

The number of Hedge-Sparrows victimized is larger than I have ever met with in one season before. Usually nearly half my Cuckoo's eggs and young are found in Sedge-Warblers' nests. This year, instead of 60 per cent. of Sedge-Warblers' nests containing Cuckoos, the percentage fell to 6.7.

In the case of a young Cuckoo found on July 13th, in a Hedge-Sparrow's nest, a pair of Lesser Whitethroats assisted the fosterers in feeding the young bird. On July 27th the cock Whitethroat seemed to resent the Hedge-Sparrow's interference, and it seemed as though the Whitethroats were about to take sole charge of the Cuckoo. This, however, did not prove to be the case, though they fed it at least six times as frequently as the Hedge-Sparrow. On July 31st this Cuckoo was found dead.

The mortality among the young Cuckoos was about the same as in previous years (*cf.* Vol. VI., pp. 330-3). Out of sixteen young birds seven failed to survive the nestling-period. In two cases eggs proved to be infertile, and four eggs were removed by rats or deserted, so that out of a total of twenty-two cases in which the result was ascertained, no fewer than thirteen failed from natural causes to reach maturity. The above list does not include a Hedge-Sparrow's nest which contained two Cuckoo's eggs, but which I did not find until all the eggs had been sucked by mice.

J. H. OWEN.

SQUACCO HERON IN SUSSEX.

TOWARDS the end of October, 1913, I had my attention drawn to a strange bird that had been seen on several occasions in the locality of Pett, Sussex. From the description of one observer who flushed it from the bed of a stream, I had no doubt that it was in all probability a Squacco Heron (*Ardeola r. ralloides*). On November 14th, I was shown an immature male of this species that had been shot at Winchelsea the previous day. As the spot where the bird was

obtained is only a couple of miles from where it was last seen in the Pett district, no doubt it was the same bird.

H. W. FORD-LINDSAY.

SLAVONIAN GREBES IN LANCASHIRE.

ON October 28th, 1913, I saw a pair of Slavonian Grebes (*Colymbus auritus*) at the Crook of Lune, Caton, near Lancaster, and Mr. F. W. Smalley informs me that he saw one on Haweswater Lake, Silverdale, north Lancashire, on October 11th. Mitchell, in his *Birds of Lancashire*, says that the species is an extremely rare winter-visitor to Lancashire, and mentions only five records of its having occurred in the county. To these must be added one from the collection of the late Dr. Cocker, said to have been shot on Windermere Lake, and now in Mr. Smalley's collection.

H. W. ROBINSON.

AVOCETS IN GLOUCESTERSHIRE.

IN March, 1913, four Avocets (*Recurvirostra avosetta*) were seen together at Stonehouse, on the Severn, Gloucestershire. Fortunately the local wildfowlers were too busy with their salmon nets to try to bag them.

H. W. ROBINSON.

BONAPARTE'S GULL IN SUSSEX.

ON November 4th, 1913, I was shown a Gull that had been shot the previous day at the Outfall Pipes, West St. Leonards, Sussex. Upon careful examination I found it to be an immature male Bonaparte's Gull (*Larus philadelphia*).

This bird is very similar in appearance to an immature Black-headed Gull, but can readily be identified, not only by its smaller size, being intermediate between the Little Gull and the Black-headed, but the primaries are very distinctive.

In the Black-headed Gull of the same age the primaries have a white centre with blackish-brown margins to both webs, whereas the Bonaparte's has a dusky brown outer web, the inner web being perfectly white. In the adult birds the same difference occurs, the colour of the margins being black instead of brownish.

The terminal band of the tail of this specimen is also only about half the width of that of a Black-headed Gull.

H. W. FORD-LINDSAY.

LITTLE GULL IN LANCASHIRE.

IN view of the fact that the Little Gull (*Larus minutus*) is only said to have occurred five times in Lancashire

according to Mitchell's *Birds of Lancashire*, it may be of interest to state that an adult was shot in Morecambe Bay, on November 7th, 1913.

H. W. ROBINSON.

[In addition to the occurrences mentioned in the *Birds of Lancashire*, this species has been recorded from the Mersey (Zool., 1904, p. 193) and the Carnforth Marshes in 1902 (*Vict. Hist. of Lancaster*, I., p. 203.—F.C.R.J.)]

SCARCE BIRDS IN IRELAND.—Prof. C. J. Patten records (*Irish Nat.*, 1913, pp. 218-20 and 235) the following interesting occurrences :—

TREE-PIBIT (*Anthus t. trivialis*).—At the Tuskar Rock (Wexford) one was obtained on August 31st, 1913, two on the night of September 3rd-4th, two on the following night, and two were found dead on the morning of September 5th (*cf. antea*, p. 170).

WHITE WAGTAIL (*Motacilla a. alba*).—At Inishtrahull (Donegal) this bird was numerous during the latter half of May, 1913, and again from August 21st to September 12th, the date on which Professor Patten writes.

PIED FLYCATCHER (*Muscicapa h. hypoleuca*).—One struck the Tuskar lighthouse on September 5th, 1913.

AQUATIC WARBLER (*Acrocephalus aquaticus*).—One was found dead on the Tuskar Rock on August 9th, 1913, this being only the second record for Ireland.

BLACK TERN (*Hydrochelidon n. nigra*).—One was picked up on the balcony of the Tuskar Lighthouse on August 31st, 1913.

ICELAND GULL (*Larus leucopterus*).—One was obtained on Inishtrahull (Donegal) on July 18th, 1913.

WHINCHAT BREEDING IN CO. CORK.—With reference to Mr. Cummings's letter (*supra*, p. 206) on this subject, although the date mentioned by Dr. Stenhouse is remarkably early, it must not be forgotten that, according to Mr. Eagle Clarke, Whinchats have been known to arrive on the English coasts as early as March 9th, Mr. Bolam has seen a specimen in North Wales on March 8th, Mr. Usher records Irish arrivals on March 17th, and there are quite a number of other records for early March. That a bird should begin to lay about a month after its arrival, in the mild climate of south Ireland, is certainly not incredible. Even in the English midland counties

there is considerable variation in the breeding-season, for while most birds lay during the latter half of May, Mr. H. S. Davenport found a nest with one egg in Leicestershire on April 30th. Dr. Stenhouse is so careful an observer that any confusion with the Stonechat is impossible, especially as he noted several pairs of Stonechats in the vicinity, but only met with one pair of Whinchats during a ten mile walk.

F. C. R. JOURDAIN.

SWALLOWS AND HOUSE-MARTIN IN ENGLAND IN DECEMBER.—Mr. C. H. Wilson writes to us, from Kirkby Lonsdale (Lancs.), that there was a single Swallow (*Chelidon r. rustica*) at that place on December 3rd, 1913. This bird was hatched there, and did not migrate with the rest of the Swallows. Mr. W. A. Coxon writes to the *Field* (13.XII.1913 p. 1252) that he saw three Swallows at Lowestoft on December 7th. Mr. R. S. Standen writes to the *Morning Post* that he saw a Swallow at Romsey (Hants) on December 18th. Mr. W. B. Nichols informs us that he and others saw a House-Martin (*Hirundo u. urbica*) at Manningtree (Essex), on December 4th, 1913.

TURTLE-DOVE IN RENFREWSHIRE.—Mr. R. W. S. Wilson notes (*Glasgow Nat.*, V., p. 130) that he saw an example of *Streptopelia t. turtur* at Williamwood three times between June 5th and 8th, 1913, but could obtain no evidence of its nesting there.

WOOD-SANDPIPER AND SPOTTED REDSHANK IN RENFREWSHIRE.—Mr. J. Robertson records (*Glasgow Nat.*, V., pp. 130-1) that he saw a specimen of *Tringa glareola* at Balgray Dam, on September 7th, 1913, and at Waulkmill Glen Dam, on September 14th, and Mr. H. Wilson saw what was probably the same bird on August 31st. On September 7th, Mr. Robertson saw two examples of *Tringa erythropus* at the same dams, and one on September 14th.

FOOD OF RED GROUSE.—In the *Field* (29.XI.1913, p. 1147) Mr. F. W. Frohawk writes that in the crops of several Red Grouse recently examined have been found large numbers of caterpillars of a common noctuid moth *Agrotis porphyrea*. Mr. Frohawk states that this caterpillar feeds only at night and hides during the day at the base of its food-plant (which is both heath and ling), and he therefore concludes that the Grouse search for it and must destroy enormous numbers.

REPORTS OF QUAIL.—A good many Quail (*Coturnix c. coturnix*) have been reported this autumn (1913), perhaps more than usual. Mr. D. J. Balfour Kirke tells us of one shot near Dunfermline (Fifeshire) on October 22nd, and Lieut.-Colonel H. Scrymgeour-Wedderburn reports one from Forfarshire on September 19th (*Scot. Nat.*, 1913, p. 259). Dr. C. W. Benson writes us of one heard near Balbriggan (co. Dublin) on June 20th. In recent issues of the *Field*, Quail have been reported in August and September from Denbighshire, Gloucestershire, Devon, Wiltshire, Hampshire, and Essex.



REVIEWS



Report on the Immigration of Summer-residents in the Spring of 1912; also Notes on the Migratory Movements and Records received from Lighthouses and Light-vessels during the Autumn of 1911. By the Committee appointed by the British Ornithologists' Club (forming Vol. XXXII., *Bull. B.O.C.*). 18 Maps. Witherby & Co. 6s. net.

As we have remarked in a previous notice, these yearly Reports (of which this is the eighth) become more and more valuable by continuity of observation on the same lines. But in addition to this the present Report is even fuller than previous ones, and this says much for the keenness of observers, as well as for the untiring labours of the Committee whose task it is to collate and report on the mass of observations.

March, 1912, was exceptionally mild, and the weather during this month as well as in April and May was favourable to migration, "consequently . . . individuals of many species arrived in various parts of the country on unusually early dates." The weather in the autumn of 1911 was also so favourable to the birds that they were not "held up," and consequently moved away so gradually as to make observation difficult. The winter of 1911-12 was chiefly remarkable for the "invasion" of Little Auks, which was well recorded in our pages, and of which a condensed report is given. Other observations of special interest which have not been previously referred to may here be mentioned.

The Lesser Whitethroat (*Sylvia c. curruca*) is recorded from Cumberland, Northumberland, and Anglesey in May, 1912. A considerable oversea immigration of Stonechats occurred at the South Foreland Light on February 24th-25th, while fourteen were killed at the Morecambe Bay Light-vessel on May 5th-6th. A Nutcracker (*Nucifraga caryocatactes* ? subsp.) is recorded from Broome (Kent), about October 9th, 1911, at the time when several were reported (cf. *B.B.*, Vol. V.). A Golden Oriole (*Oriolus o. oriolus*) was seen near Scarborough (Yorks.) on July 9th, 1911, and another during the summer and until August 28th, at Cusop (Hereford). A Red Grouse (*Lagopus l. scoticus*) was killed on Bardsey Island (Carnarvon) on April 20th.—H.F.W.

The Peregrine Falcon at the Eyrie. By Francis Heatherley, F.R.C.S. "Country Life" Library. pp. 78, Demy 4to. 5s. net.

Our Common Sea-Birds. By Percy R. Lowe, B.A., M.B., etc. "Country Life" Library. pp. 310, 4to. 15s. net.

THESE two volumes of the "Country Life" Library are chiefly notable for the beauty of their photographic illustrations, which are admirably printed, with the text, on glossy "art" paper. In some ways this is an objectionable arrangement, as the print on the highly-glazed paper is trying to read, and one cannot turn over a page devoted to an illustration which intervenes, perhaps in the middle of a sentence, without admiring the photograph, and thus losing the thread of the narrative.

Dr. Heatherley's book is the more important to the serious student. It is based on notes made during three successive springs at the same eyrie, and while there is much information which will be of interest to photographers, we are also given a very complete account of the methods and times of feeding the young and the nature of the food, and much concerning the temperaments of the parent-birds. The style of the narrative is somewhat monotonous if at times highly colloquial, while the head-lines to the pages are so absurdly phrased as to be much more fitting to a book of nursery rhymes than one of Natural History. The author writes of the two smaller birds of the four young as "males"; but of this he appears to have no proof, and it seems more likely that these two were the last hatched than that they should show so marked a sexual difference in size when only a few days old. The most interesting point brought out in the text is, perhaps, that the male Falcon attended chiefly to the young, while the female did most of the hunting and brought the quarry to the tiercel, but it would be unwise to give this observation general application owing to the fact that there was a "hiding-shed" quite near the eyrie and that the female was very shy while the male was very bold. Dr. Heatherley makes some exaggerated remarks about the "official ornithologist," under which term apparently he includes all those who are not content to study merely the living bird. Anyone who collects either birds or eggs is to him anathema, while subspecies-making is one of the "saddest features of modern ornithology." In fine, our author would have us all study birds in his own way and no other. Yet he cannot say from his own knowledge whether the male or female

Peregrine Falcon is the larger—and he is evidently very anxious to know. But Dr. Heatherley's ignorance of scientific ornithology and consequent failure to discriminate between useful and useless collectors, may well be forgiven for the sake of his superb photographs, most of which are not only most beautiful, but at the same time portray actions and poses which it is valuable to have recorded.

Dr. Lowe is eminently fitted, by reason of his many cruises and facile pen, to give a popular account of sea-birds. In the book under notice (which is the first of two volumes on the subject) he appears, however, to be labouring somewhat at a disadvantage, as the numerous photographs are rather obviously the *raison d'être* of the book, and occupy considerably more space than the letterpress. As a consequence, perhaps, of this arrangement the letterpress, though pleasant and informing, is somewhat lacking in originality. But Dr. Lowe is not responsible for the whole book, a good many chapters being provided by a number of other writers. Amongst these Mr. W. R. Ogilvie-Grant discusses the sequence of plumages in the Cormorant, and reiterates his opinion that the birds with white breasts are invariably birds in their first year, and that in the second year the breast is "glossy-black, more or less mottled with white." Notwithstanding Mr. Grant's assertions to the contrary, we venture to say that it will be found on further investigation that a Common Cormorant with a white breast is not necessarily a bird in its first year's plumage.

H.F.W.



LETTERS



GREEN WOODPECKER EATING AN APPLE.

To the Editors of BRITISH BIRDS.

SIRS,—Is it generally known that the Green Woodpecker eats fruit? I watched one on October 23rd making a hearty meal off an apple a few yards from my window, and since then many large apples picked up plainly show the marks of this bird's powerful bill. My gardener, who has lived here all his life, tells me he never saw one touch an apple before, though they frequent the orchard from the adjoining pine-woods.

ARTHUR R. GILLMAN.

HEATH VALE, FARNHAM, *December 12th*, 1913.

BREEDING-HABITS AND YOUNG OF ROSEATE TERNS.

To the Editors of BRITISH BIRDS.

SIRS,—I was much interested in Mr. Humphreys's remarks on the nesting of these birds in Ireland (*antea*, pp. 186-9). His observation on the number of eggs entirely agrees with my own on a large colony in Great Britain. I must have examined upwards of two hundred "nests." My visit was on July 13th, when incubation was in most cases far advanced (in fact several young were already hatched), but only in about a dozen cases was the parent bird brooding more than a single egg, not one clutch contained three. There was a large colony of Common Terns at the same place; their nests were on the higher flat portion of the land, while the Roseate Terns preferred the rocky sides and had in many instances laid their eggs in cracks or small fissures without any attempt at a nest. Whereas the young in down of the Common and Arctic Terns are so much alike that it is exceedingly difficult to separate them, the Roseate Terns are absolutely distinct, the down might almost be described as "hair-like" and of a totally different pattern, far nearer the Sandwich Tern of the same age. I spent six hours watching the Terns, and it was curious to notice how every few minutes the whole colony would rise, as if actuated by a single impulse, and fly far out to sea, only to return and brood immediately. The exodus continued at intervals during my entire stay, and it is a mystery how the eggs ever hatch out. In the midst of this vast assemblage of Common and Roseate Terns, a single pair of Arctics had their nest.

With regard to the number of eggs laid by terns, it may be interesting to note that whilst in Iceland this summer we saw hundreds, if not thousands, of Arctic Terns' nests in all stages of incubation, but not twenty contained so many as three eggs.

TEMPLE COMBE, HENLEY-ON-THAMES.

HEATLEY NOBLE.

HERRING-GULLS DIVING.

To the Editors of BRITISH BIRDS.

SIRS,—The Scarborough Herring-Gulls, which frequent the harbour in considerable, and increasing, numbers, have acquired the habit of diving for food in the manner described by Mr. S. G. Cummings (*antea*, p. 201). The plunge much resembles that of one of the terns, the bird diving from a height of several yards, with outstretched neck and half-closed wings. Sometimes the bird is completely submerged, but more often the tips of the primaries are not covered by the water. I have not seen the Common or Black-headed Gulls, which are equally abundant, attempt to dive for food.

SCARBOROUGH, *December 5th*, 1913.

W. J. CLARKE.

To the Editors of BRITISH BIRDS.

SIRS,—I have, during the past summer, frequently watched Herring-Gulls, particularly immature birds, submerging themselves in the manner described by Mr. Cummings, in Beer Bay, South Devon. Through the village runs a very swift-flowing stream, which, at a short distance from the beach, is confined in a large pipe from which it does not escape until some distance out to sea. The reason I had assigned for the diving tactics of the gulls was, that the "tit-bits" being carried along for some distance under water by the force of the stream, the bird which could secure them at the point nearest the pipe, and consequently furthest from the surface, was likely to reap the reward of his daring. I have also watched, and been much amused by, the futile and somewhat inelegant efforts of Herring-Gulls at this spot to dive, like a grebe, from the surface—without the initial tern-like plunge.

LEWIS R. W. LOYD.

MAIDA VALE, LONDON, W., *December 8th*, 1913.

To the Editors of BRITISH BIRDS.

SIRS,—I have often stood and watched the Herring-Gulls diving in deep water in Lerwick Harbour, in exactly the same manner as described by Mr. S. G. Cummings.

JOHN S. TULLOCH.

LEOG, LERWICK, *December 6th*, 1913.

PLUMAGE OF THE GLAUCOUS GULL.

To the Editors of BRITISH BIRDS.

SIRS,—The Glaucous Gull (*Larus glaucus*), as is generally known, after the first ash-brown plumage, becomes paler at each moult until it is white, subsequently the adult plumage is attained in which the mantle and the greater part of the wings are pearl-grey.

In a bird of this species in my possession, shot in Shetland early in 1913, the major portion of the plumage is that of the immature bird, but most of the mantle is pearl-grey. This is an interesting specimen, as the bird is evidently going straight from the ash-brown plumage of immaturity to that of the adult, the white phase being omitted. On the theory that the various plumages through which a bird passes in its progress to maturity recapitulate ancestral stages of plumage, in this case the intermediate stages of the recapitulation have been suppressed.

ERIC B. DUNLOP.

BRITISH BIRDS

EDITED BY H. F. WITHERBY, F.Z.S., M.B.O.U.

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ERYTHRISM IN THE EGGS OF BRITISH BIRDS.

BY

THE REV. F. C. R. JOURDAIN AND CLIFFORD BORRER.

ALTHOUGH many scattered notes on this subject may be found in the various ornithological journals, very little has hitherto been done to collect these separate records; and beyond a short note by Adolf Kricheldorf in the *Zeitschrift für Oologie*, XIII., Jahrg., p. 10 (1903), "Ueber vote Variationen der Vogeleier," and a paper by F. C. R. Jourdain "On Colour Variation in the Eggs of Palæarctic Birds," which appeared in the *Proceedings of the 4th International Ornithological Congress*, 1905, pp. 580-93, there is practically no literature on the subject.

In the present paper we have treated in detail those cases where either a definite type, or, at any rate, a variety of the egg, has been recorded in which the colouring matter consists of öorhodein alone, i.e. the markings are of shades of red or reddish-brown only, but the range of colour-variation in the species includes eggs which are also coloured with biliverdin (bile pigment), either alone or with other colouring matter, to form the various shades of blue and green.

For this reason it has not been thought necessary to notice such eggs as those of the Accipitres, which are normally marked with red, and only rarely show traces of any other colouring matter, though in the literal sense they are, of course, erythristic. In Section II. we have briefly dealt with those species which normally lay white or blue eggs, but occasionally produce specimens more or less distinctly marked with red or red-brown.

SECTION I.

RAVEN (*Corvus c. corax*).—One set of erythristic eggs was taken in 1854 in Unst, Shetland, and is now in the Cambridge University Museum (*Ootheca Wolleyana*, Vol. I., p. 524, § 2796).*

HOODED CROW (*C. c. cornix*).—A clutch of five erythristic eggs, obtained about 1887 near Gothenburg, Sweden, by J. Ramberg, is now in the Gothenburg Museum. A set of three dull brick-red eggs was taken at Dunessan, Mull, about May 1st, 1877 (R. H. Mitford, *Zoologist*, 1882, p. 69).

* The red variety is also said to have occurred in the Canarian Raven (*C. corax canariensis*).

ROOK (*C. f. frugilegus*).—The beautiful red variety of the Rook's egg has occurred several times in Germany, but has never been found in these islands. Baron von König-Warthausen obtained three clutches (eleven eggs) of this type in the years 1891 and 1893 (*Zeitschr. f. Oologie*, V., Jahrg., p. 6), and J. von Wangelin obtained two red eggs in 1896, one of which is figured in the *Neuer Naumann*, Vol. IV., 47, fig. 26, and Jourdain (*Eggs of European Birds*, pl. 41. See *Ornith. Monatsschr.*, 1898, p. 264).

MAGPIE (*Pica p. pica*).—A. Kricheldorff (*Zeitschr. f. Oologie*, XIII., p. 10) states that the red variety occurs in this species; and F. C. R. Jourdain took a clutch of six eggs near Ashburne, Derbyshire, May 4th, 1900, in which two eggs show distinctly erythristic colouring.*

JAY (*Garrulus g. rufitergum*).—Mr. H. S. Davenport took a clutch of delicate pink eggs in Shobden Wood, Hereford, in 1887, which were formerly in the possession of Mr. L. Field, and are probably now in the Calke Abbey collection. Mr. P. F. Bunyard exhibited a set of six eggs (Northants, 1907) to the British Ornithologists' Club (*Bulletin B.O.C.*, Oct., 1913) which are of a pale yellowish-red colour, and similar eggs from the New Forest and the Continent are in his collection.

[The normal type of the Chough's egg shows a distinct tendency to erythrism. Some eggs, both from Ireland and Spain, have warm red-brown spots.]†

HAWFINCH (*Coccothraustes c. coccothraustes*).—A scarce variety, with a creamy ground and reddish-yellow markings, has been taken in England on several occasions, chiefly in the south-eastern counties (Kent, Essex, Suffolk, etc.) and also in Germany (Brit. Museum).

GREENFINCH (*Chloris c. chloris*).—In some sets the light blue tinge is entirely absent from the ground-colour, and is replaced by faint reddish-white, while the markings are

* Kricheldorff (*loc. cit.*) states that the erythristic type, with pink ground and red spots, also occurs in the Moorish Magpie (*Pica p. mauritanica*).

† Some foreign species of this family have eggs which are normally erythristic in colour. The best-known example is the Cape Rook (*Corvus capensis*), the eggs of which are always of this type (*Cat. Eggs Brit. Mus.*, Vol. V., pl. XXI., figs. 4, 5). Mr. E. C. Stuart Baker has also a remarkable set of erythristic eggs of *C. splendens*, and in some species of the genus *Dendrocitta* the red type is normal or practically so. The eggs of *Urocissa occipitalis* furnish a good erythristic variation, and in *Cissa sinensis* the eggs range from white to reddish.

also very rufous. Mr. Bunyard has a remarkable clutch from Gloucestershire.

LINNET (*Carduelis c. cannabina*).—A similar variation occurs not uncommonly in this species.

BULLFINCH (*Pyrrhula p. pileata*).—A scarce variety in which the ground is white, with a few brown or reddish markings, has been taken in Somerset (R. H. Read), Northants (C. E. Wright, 1902), and Mr. P. F. Bunyard also possesses examples from Kent and Surrey. In the latter county this variety is not uncommon, according to Mr. H. Kirke Swann, and four instances are mentioned in the *Ornithologist*, pp. 96-97.

CROSSBILL (*Loxia c. curvirostra*).—Some sets have no bluish tinge in the ground-colour, and lack the dark markings. A Suffolk clutch, taken by Mr. Bunyard, is of this character.

SCOTTISH CROSSBILL (*L. c. scotica*).—Clifford Borrer took a set of four in Ross-shire, March, 1909: ground-colour white with clear red spots. This type is not very infrequent, and is represented in Major Stirling's collection.

HOUSE-SPARROW (*Passer d. domesticus*).—Erythrism is more or less noticeable in many eggs. Mr. D. Welburn possesses a set of four red eggs (P. F. Bunyard).*

TREE-SPARROW (*P. m. montanus*).—Erythristic eggs are rare, but have been occasionally recorded, and are figured by Frohawk (plate iv., figs. 146, 7).†

CORN-BUNTING (*Emberiza c. calandra*).—Vinous coloration is more or less distinctive of all eggs of the Corn and Yellow Buntings. In this species many eggs have the red-brown markings extremely well developed, and the type which is figured by Frohawk (pl. v., fig. 187) occurs not only in England but also in southern Europe and north Africa.

YELLOW-BUNTING (*E. c. citrinella*).—The same remarks apply also to this species, except that its range is more limited, and the markings are never so heavy. (See Jourdain, *Eggs of Eur. Birds*, pl. XIII., figs. 9-11, and Frohawk, pl. v., fig. 189).

[In the Cirl Bunting (*E. cirlus*) the ground-colour nearly always shows some trace of bluish, but Mr. E. W. Blagg

* Jourdain also possesses a clutch of the eastern race (*Passer d. indicus*) with red spots on a white ground, from the Persian Gulf.

† Some eastern sparrows such as the Yellow-throated Sparrow (*Gymnorhis flavicollis*) also exhibit erythristic variations. A red egg is figured in the *Cat. Eggs Brit. Mus.*, V., pl. x.

has a set on which he caught the hen, in which it is altogether absent.]

LITTLE BUNTING (*E. pusilla*).—The most perfect example of an erythristic phase in this genus, as the colouring ranges from brownish-red markings on a pinkish ground to sepia markings on a greenish. Red eggs may be seen in the British Museum, and Mr. J. M. Goodall has a similar clutch from the Petschora.

REED-BUNTING (*E. s. schæniclus*).—Vinous coloration is rare in this species but occasionally occurs (see Frohawk, pl. VI., figs. 205, 206).

SNOW-BUNTING (*Plectrophenax nivalis*).—The type with a distinctly bluish ground is rare, and the more or less erythristic type is normal in this species. An extreme example is figured by Frohawk (pl. VI., fig. 207).

CRESTED LARK (*Galerida c. cristata*).—The late Dr. E. Rey possessed an extraordinary variety in which the ground-colour was distinctly reddish, and the general effect darker and redder than the ordinary mottled type of red Tree-Pipit's egg (*cf. Eier der Vögel Mitteleuropas*, p. 256).

[**WOOD LARK** (*Lullula a. arborea*).—These eggs generally show a tendency towards erythrism, and have occasionally been found spotted with red on a white ground, almost like the eggs of the Swallow (Wales : Dr. J. H. Salter).]

SKY-LARK (*Alauda a. arvensis*).—A set of three red eggs has been taken in the Orkneys, and is now in Mr. Bunyard's collection.

TAWNY PIPIT (*Anthus campestris*).—A Spanish clutch in Mr. H. Massey's collection has distinctly red-brown markings.

TREE-PIPIT (*A. t. trivialis*).—The red types, either mottled or boldly spotted and streaked, are extremely common in some districts, and are too well-known to need description here. They are figured in most works on Oology. Mr. Staines Boorman possesses a wonderful set of four terra-cotta coloured eggs (Suffolk).

[**MEADOW-PIPIT** (*A. pratensis*).—Mr. R. H. Read has a set from Surrey not unlike one type of the Grasshopper-Warbler. Further evidence seems desirable before the occurrence of erythrism in this species can be regarded as established.]

ROCK-PIPIT (*A. s. obscurus*).—A beautiful pink variety is occasionally met with in the Orkneys, from which locality Mr. F. C. Selous has a bright pink clutch, and Mr.

J. M. Goodall has two sets. Mr. W. Eagle Clarke has also recorded a red set from Foula, and a nest from the Isle of Wight, which was supposed at the time to be that of the Grasshopper-Warbler, probably belonged to this species. There is also a set from Dorset in Mr. H. Massey's collection, and R. J. Ussher's collection in the Dublin National Museum contains two sets from co. Kerry (see *Zoologist*, 1844, p. 638: Morey, *Guide to Nat. Hist. of I. Wight*, p. 502).

YELLOW WAGTAIL (*Motacilla f. rayi*).—The late F. Bond possessed a clutch from Freshwater with one pink egg.

BLUE-HEADED WAGTAIL (*M. f. flava*).—Kricheldorf states that red eggs are very rare (*Zeitsch. f. Ool.*, XIII., p. 11).

GREY WAGTAIL (*M. b. boarula*).—The variety with creamy ground and light rufous markings (resembling some types of Robin's eggs) has been taken in Germany, according to Dr. E. Rey, and Mr. E. W. H. Blagg took a clutch of this description in Staffordshire in 1904.*

WHITE WAGTAIL (*M. a. alba*).—The late Dr. O. Ottosson had a red clutch of eggs taken in Iceland in 1879, which is now in the Swedish National Museum. Seebohm describes (*Brit. Birds*, Vol. II., p. 201) a type from his own collection as being: "dull white in ground colour, thickly marbled, splashed, and spotted over the entire surface with reddish-brown, and pale brown."

[Although the true erythristic type is not known to occur in the LESSER GREY SHRIKE (*Lanius minor*), some clutches show a tendency in that direction, and G. Krause figures a set with a creamy ground and brown and violet markings, in his *Oologia Universalis Palæarctica*.]

WOODCHAT-SHRIKE (*Lanius s. senator*).—Red eggs are rare in this species, but Kricheldorf has received several sets from south Spain, where *L. collurio* does not breed. The British Museum contains four sets with salmon-pink ground and chesnut and purple-grey markings, from Greece and Asia Minor (Seebohm, *Col. Fig.*, pl. 54); Mr. H. Massey has a set from Switzerland, and the red type has also occurred in Algeria (H. B. Tristram).

CORSICAN WOODCHAT-SHRIKE (*L. s. badius*).—The late John Whitehead found one clutch of salmon-pink eggs out of some twenty nests examined, and F. C. R. Jourdain obtained a couple of sets in Corsica in 1900.

* The erythristic type also occurs in the eggs of the Asiatic Grey Wagtail (*M. b. melanope*), according to Taczanowski (*Faune Orn. Sib. Orient.*, p. 375). A pink egg taken by W. E. Brooks in Kashmir is in the British Museum.

RED-BACKED SHRIKE (*L. c. collurio*).—In this species the erythristic types are quite common, and vary considerably in intensity of colouring. Some British clutches are as deeply coloured as any Continental, but it is curious to note that in Corsica the other types predominate almost to the exclusion of the red form.

[WAXWING (*Ampelis garrulus*).—Although John Wolley applied the term “salmon coloured” to some eggs of this species, there seems to be no justification for such an expression (see *P.Z.S.* 1857, p. 56; *Ibis* 1861, p. 101, and *Ootheca Wolleyana*, I., p. 221).]

SPOTTED FLYCATCHER (*Muscicapa s. striata*).—Clutches frequently occur in which the greenish ground is almost obscured by heavy red markings. A clutch taken by Clifford Borrer in Norfolk shows no trace of green, and is richly marked with light red on a creamy ground. A similar set is in Mr. Bunyard's collection from Kent.

RED-BREASTED FLYCATCHER (*M. p. parva*).—According to Kricheldorf the eggs of this bird are sometimes erythristic.

[CETTI'S WARBLER (*Cettia c. cetti*).—The eggs are invariably of some shade of red, generally dark, but there is no tendency to any other colouring, so that they hardly come within the scope of the present paper.]*

MARSH - WARBLER (*Acrocephalus palustris*).—The only known instance of erythrism in the eggs of this species is a beautiful red clutch of German origin, which is now in the museum of Dr. A. Koenig, at Bonn (F.C.R.J.).

BLYTH'S REED-WARBLER (*A. dumetorum*).—These are variable eggs, some being marked with pinkish-brown and violet on a pink ground, or with fine reddish specks on white. The British Museum contains distinctly red specimens from the Altai and Krasnoyarsk.

SEDGE-WARBLER (*A. schænobaenus*).—A pink variety occurs rarely: the Bidwell collection contained two eggs from Carlisle, taken by T. Duckworth; Mr. J. Young took a clutch in Scotland (*Ann. Scott. Nat. Hist.* 1901, p. 49), and Mr. R. H. Read found another near Glasgow; a fourth set formed part of Mr. L. Field's collection, and a fifth was found in the Esk Valley in 1892 (*Birds of Yorks.*, I., p. 93).

[GARDEN-WARBLER (*Sylvia borin*).—There is a red egg in the British Museum from Berkshire, but it is an old

* A distinctly erythristic type not uncommonly occurs in the eggs of the River-Warbler (*Locustella fluviatilis*).

specimen from the Gould collection, and without data, so may have been wrongly identified. Kricheldorf however (*loc. cit.*) states that he possesses a genuine erythristic clutch. Mr. C. E. Wright took a set in Northants, in 1907, with light brown blotches faintly tinged with pink; and Mr. W. Fitzherbert Brockholes possesses a clutch of five red eggs taken at Claughton, Lanes., 25th May, 1903, which he ascribes to this species, stating that his woodman who found the nest carefully identified the bird. We venture to think that erythrism in this species still requires definite proof.]

BLACKCAP (*S. a. atricapilla*).—The red type in this species is well-known, and specimens are to be found in most collections. It is fairly common in Germany, and though never frequent anywhere, has occurred in most parts of England. Mr. P. F. Bunyard's collection contains a very fine series of eighteen British and Continental clutches. Rey estimated the proportion of red eggs in Germany at 6 per cent. The remarkable variety with chesnut blotches on a white ground has occurred in England as well as in the Canaries, and is figured in the *Cat. Eggs Brit. Mus.*, IV., pl. VIII., figs. 10-14.

WHITETHROAT (*S. c. communis*).—In England the red variety is rare, but several instances are known. Mr. T. Parkin has a set from Kent, formerly in the Bond collection; the late Mr. H. J. Pearson had one taken near Nottingham; Mr. R. H. Read has a red set from Oxfordshire, and also a pink clutch from Ealing; F. C. R. Jourdain has one from Leicestershire, and a set from Northumberland is in Mr. J. M. Goodall's possession. A clutch of red eggs from Gloucestershire was formerly in Major F. W. Proctor's collection, and two sets of pink eggs from Yorkshire are recorded by Nelson (*Birds of Yorks.*, I., p. 66). Mr. P. F. Bunyard has four erythristic clutches of Continental origin.*

[**LESSER WHITETHROAT** (*S. c. curruca*).—The true red type is not known to occur in the eggs of this species, but one set in Mr. Bunyard's collection is tinged with pale red.]

SARDINIAN WARBLER (*S. m. melanocephala*).—Erythristic types are not uncommon in this species. Though not as a rule very bright in colour, they range from apricot-pink to dull brick-red. Clutches of this type have been

* The Eastern Whitethroat (*S. c. icterops*) frequently lays eggs of an erythristic type in central Asia.

taken by Mr. F. C. Selous, Capt. H. Lynes, R.N., F. C. R. Jourdain, Dr. Hartert, and others. Although frequently met with in Spain, and also recorded from Malta and Algeria, the red type has not been found in Corsica.

SUBALPINE WARBLER (*S. c. cantillans*).—In some parts of south Spain an extremely handsome erythristic type is normal, in which deep chesnut-red blotches and spots are found on a white ground. Captain H. Lynes, R.N., has taken several sets of this kind. Other eggs are marked with red-brown spots. In Corsica the erythristic type appears to be absent, but in Greece the eggs of the eastern form of this species (*S. c. albistriata*) frequently exhibit this colouring (Seebohm, *Col. Figs. Eggs Brit. Birds*, pl. 53).

DARTFORD WARBLER (*S. u. dartfordiensis*).—We are not aware of a single authentic instance of erythrism in the eggs of the British race of this species, but it is not at all uncommon in those of the Continental race (*S. u. undata*). Mr. H. Noble took three sets of the red type in Andalusia (*Ibis*, 1902, p. 69), and it has also been met with in the same district by Mr. F. C. Selous and F. C. R. Jourdain. A good many Continental clutches have been sent over at different times by native collectors. The resemblance of these eggs to those of certain types of the Sardinian Warbler should be constantly borne in mind.

WHITE'S THRUSH (*Turdus d. aureus*).—Eggs of this species tend to fall into two distinct types, with light bluish-grey or warm brownish ground. One unusually handsome set in F. C. R. Jourdain's collection is reddish-brown with darker freckles, only the odd egg showing the buffish ground.

FIELDFARE (*T. pilaris*).—The eggs of this species vary in much the same way as those of the Blackbird. We have not, however, met with the white grounded type, though specimens in which the ground is almost obscured by reddish markings, and red capped eggs, are occasionally found.

MISTLE-THRUSH (*T. v. viscivorus*).—The greenish ground is quite obscured in some specimens by reddish-brown, and in other cases is replaced by creamy-white. The latter type when combined with red markings may fairly be claimed as erythristic.

BRITISH SONG-THRUSH (*T. ph. clarkei*).—Two eggs from Warminster, in the British Museum, are white sparingly marked with rusty-brown and lilac (*Cat. Eggs Brit. Mus.*,

IV., pl. viii., fig. 12). Mr. P. F. Bunyard has four sets from Surrey and Sussex, pure white spotted with pale red, and one of his specimens is figured by Dresser (*Eggs of Birds Eur.*, pl. iii., fig. 4). The Cambridge Museum also contains a clutch of four (Bucks.) and a single egg (Norfolk) white with reddish-brown spots (*Ootheca Wolleyana*, I., p. 288).

BLACKBIRD (*T. m. merula*).—It is not very uncommon to find eggs in which the ground is almost entirely hidden by reddish-brown markings. Others have the red concentrated at the large end (see Frohawk, *Brit. Birds*, pl. i., fig. 17, and *Cat. Eggs Brit. Mus.*, IV., pl. viii., fig. 7). A much rarer variety has a creamy-white ground with spots and streaks of light chesnut. A clutch of four from co. Waterford (1890) of this description is in the British Museum (*Cat. Eggs*, IV., pl. viii., fig. 1), and R. J. Ussher (*Birds of Ireland*, p. 7) mentions other clutches taken in Waterford in 1885 and 1890, some of which are in the collections of Mr. R. W. Chase and Owen's College (Dresser, *Eggs of Birds of Europe*, pl. ii., fig. 8). The Bidwell collection also contained two eggs with pink spots on a white ground, and erythristic specimens also exist in the Dresser (Spain) and Johnson collections, and that of Mr. F. Coburn. Mr. Chase has also similar sets from Lincolnshire and Cambridge.

[NIGHTINGALE (*Luscinia m. megarhyncha*).—A scarce variety is clouded with reddish-brown on an abnormally pale ground. A clutch (Northants) exhibited by Mr. Bunyard to the British Ornithologists' Club is of this description (see *Bull. B.O.C.*, Nov. 1913).]

[NIGHTJAR (*Caprimulgus e. europæus*).—No erythristic eggs have been recorded of the European Nightjar, but Mr. Bunyard's collection contains a pair which are distinctly flushed with a pale roseate tinge. Many of the tropical species of this genus normally lay pinkish-brown or apricot coloured eggs.]*

CUCKOO (*Cuculus c. canorus*).—The extraordinary range of variation in the eggs of this species is common knowledge, and there is quite an extensive literature on the subject. On the whole, the variation in British-taken

* The Fantail Warbler (*Cisticola c. cisticola*) furnishes a good example of erythristic variation, one type of their variable eggs being white with red markings. The blue types, which are not uncommon in southern Europe, are wanting in the eggs of the eastern race (*Cisticola c. cursitans*).

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eggs is decidedly less than in an equally large series of Continental specimens. British "red" eggs are, as a rule, rather dull in colour, but occasionally bright-coloured eggs occur, chiefly in the southern counties. Mr. Staines Boorman possesses a fine red Cuckoo's egg taken with four Robin's near Woking in 1903. Mr. H. Massey has no fewer than ten red eggs with various fosterers (*antea*. VI., p. 122), and some of the red types have been figured by Dresser (*Eggs of Birds Eur.*), Seebohm (*Col. Figs.*, pl. 49), Frohawk (*Brit. Birds*, pl. VIII.), Jourdain (*Eggs of Eur. Birds*, pl. 39, 40).*

KENTISH PLOVER (*Charadrius a. alexandrinus*).—The Hungarian National Museum at Budapest contains a wonderful red clutch of three eggs taken locally by Cerva (F.C.R.J.).

GOLDEN PLOVER (*Ch. apricarius*).—Some eggs are very warm in colouring and show no trace whatever of blue or greenish in the ground.

LAPWING (*Vanellus vanellus*).—Mr. E. Bidwell's collection contained several examples of red eggs of this bird. Lot 76 (Sale: June 23, 1903) consisted of four eggs from Pitsea, Essex, with dark red ground, taken by R. Fitch, and a set of three from the same locality formed lot 124 at the same sale. Lot 70 was a single egg with purple-red spots on a white ground. Mr. J. M. Goodall has a wonderful series of these red eggs, some of which are very brilliant, from Leadenhall Market and other sources. Mr. G. Swann possesses a single egg, found by a boy gathering Plover's eggs near Dumfries (1913), which is white with a few rust-red markings.

COMMON SANDPIPER (*Tringa hypoleuca*).—The only erythristic set of this species which we have seen is in the possession of Mr. F. Coburn, and was taken in North Wales (F.C.R.J.).

WOOD-SANDPIPER (*T. glareola*).—Kricheldorf states that he received an erythristic clutch from Lapland in 1902 (*Zeitschr. f. Ool.*, XIII., p. 11).

GREEN SANDPIPER (*T. ocropus*).—The late Mr. A. W. Johnson possessed a beautiful erythristic set of this bird, and single eggs with pinkish ground occasionally occur.

* It is a remarkable fact that in an Indian race of the Cuckoo (*C. c. bakeri*) the red type has become normal, and practically all its eggs are creamy-white or reddish in ground-colour, with fine red-brown spots, generally in the form of a zone.

REDSHANK (*T. totanus*).—Individual eggs have a distinct tendency towards erythrism. Mr. G. K. Baynes has a clutch (Norfolk) in which one egg is very red, while the others are practically normal. Mr. T. P. Aldworth has a fine set with a creamy ground and light red spots from the Orkneys. There was a clutch of three dark red eggs from Stanford-le-Hope in the Bidwell collection, which passed into Major Proctor's possession, and was sold, together with a set of reddish eggs from Valkenswaard, Nov. 21, 1912. Mr. F. Coburn has also a fine red set from Wareham.

GREENSHANK (*T. nebularia*).—Some very richly marked eggs are distinctly erythristic in character.

SNIBE (*Gallinago g. gallinago*).—Major F. W. Proctor's collection included a set from Harray, Orkneys, which is described as the red variety (sold, Nov. 21, 1912).

COMMON TERN (*Sterna hirundo*).—For many years past a few sets of red eggs have been obtained at one British locality, but as far as we are aware nowhere else. Some of these eggs have very brilliant blood-red markings on red ground, while others, which are probably second layings, are of a more rusty-red colour. A set of each phase was exhibited by Clifford Borrer at the British Ornithologists' Club, June 11, 1913 (*Bull. B.O.C.*, XXXI., p. 112). Other clutches exist in the collections of Mr. P. F. Bunyard, the Rev. J. R. Hale, and Major Stirling.

ARCTIC TERN (*S. paradisæa*).—Mr. A. Chapman mentions having found a clutch of two red eggs in Norway, laid on red moss (*Wild Norway*, p. 299), and Mr. Bidwell informs us that he formerly possessed a pair of red eggs from Iceland. The Reykjavik Museum contains a single bright red specimen from the coast of Iceland (F. C. R. Jourdain, *antea*, VI., p. 243).

BLACK-HEADED GULL (*Larus ridibundus*).—A clutch of three red eggs was taken on Loch Rogart on May 11th, 1882. One of these eggs passed into the Bidwell collection, and formed lot 69 of the sale on June 23, 1903; the other two are now in the Dunrobin Museum, and are figured in Harvie-Brown and Buckley's *Vert. Fauna of Sutherland, etc.* Dr. Ottosson had also erythristic eggs of this species in his collection, and Herr G. Krause states that five eggs, ranging in colour from pale red to red-brown with dark red or red-brown markings, have been taken on the Kunitzen See in Germany (*Orn. Monatsber.*, 1904, p. 123).

HERRING-GULL (*L. a. argentatus*).—It has long been known that red eggs of one or more of the larger gulls occurred

at one or two localities on the Norwegian coast, especially on the islands off Vardö in East Finmark. Professor Newton's collection contained specimens taken as long ago as 1855. They were first ascribed to the Glaucous Gull, and under this name eggs have been referred to by Dixon (*Nests and Eggs Non-indigenous Brit. Birds*, p. 289), and are figured by Seebohm (*History of Brit. Birds*, pl. 50), and more accurately in his *Coloured Figures of Eggs Brit. Birds*, pl. 32. More careful investigations by the late H. J. Pearson and others showed that these eggs in some cases were undoubtedly laid by Herring-Gulls, that the Glaucous Gull did not breed in the district, and that the only other species nesting in the vicinity were *L. marinus* and *L. fuscus*. The collections of Messrs. H. J. and C. E. Pearson contain fine series of these eggs, as also does that of Professor Koenig (fifteen) at Bonn. The Cambridge Museum has eleven specimens, and there are several in the British Museum (wrongly catalogued as *L. glaucus*), while Mr. Massey has a wonderful series of thirty-three red eggs, some of which are apparently *L. marinus*. Among other collections in which the red type is represented are the Tromsö Museum, the Swedish National Museum (Ottosson collection), the Gothenburg Museum, and the collections of Messrs. R. H. Read (three), P. C. Musters, W. Rothschild, F. C. R. Jourdain (three), N. F. Ticehurst (one), and P. F. Bunyard (three).

GREAT BLACK-BACKED GULL (*L. marinus*).—This species appears occasionally to produce erythristic eggs in northern Norway. Besides those in Mr. Massey's collection already mentioned, the late Dr. Ottosson had examples now in the Stockholm Museum.

ICELAND GULL (*L. leucopterus*).—The Tring Museum contains two dark red eggs from Labrador ascribed to this species.

RAZORBILL (*Alca torda*).—Though the extent of variation is not so great as in the Guillemot, and the majority of eggs are marked with various shades of brown on a light ground, some eggs of this species can with reason be classed as erythristic.

COMMON GUILLEMOT (*Uria t. troille*).—The range of variation is so well-known in this species, that it is unnecessary to go into detail beyond stating that both extremes of cyanism and erythrism are to be met with. In the latter types the ground-colour ranges from white to buff and pinkish-brown, and the markings from light

yellowish-brown to black and deep blood-red. Mr. J. M. Goodall has some magnificent specimens of the "port wine" red type.

[BRÜNNICH'S GUILLEMOT (*U. l. lomvia*).—These eggs tend to vary in the same way, but to a much smaller extent, and we have never seen a well coloured "red" egg.]

[NOTE.—Mr. Goodall possesses an extraordinary clutch of the Moorhen (*Gallinula c. chloropus*) which is entirely covered by an orange-red deposit. As this is probably caused by the deposit of ferrous oxide, it is of course not due to erythrisms. In F. C. R. Jourdain's collection is a set of three eggs of the Purple Gallinule (*Porphyrio cæruleus*), two of which are distinctly erythristic; but as there appears to be no variation towards blue or green coloration, these have little claim to consideration here. The same applies also to the erythristic eggs of the game-birds, among which may be mentioned the Capercaillie (*Tetrao urogallus*) of which Mr. Staines Boorman has a remarkable red set from Kirriemuir laid on bright red beech leaves, and the Red Grouse, Ptarmigan, Quail, etc., in which the usual brownish-black markings are sometimes replaced by blood-red. Eggs of the Green Woodpecker (Suffolk) have been recorded as "blotched and spotted with reddish-brown" (*Zoologist*, 1848, p. 2229; and 1850, p. 2923). This was doubtless caused by a vegetable stain.]

SECTION II.

STARLING (*Sturnus v. vulgaris*).—Mr. A. Hardy states that he found an egg at Alderley Edge in 1905 which was distinctly spotted with red, and Mr. J. Whitaker also picked up an egg similarly marked at Rainworth, Notts.*

ROCK-THRUSH (*Monticola saxatilis*).—In this species two types of eggs are found, one blue without markings, and the other with fine frecklings of reddish-brown.†

WHEATEAR (*Ænanthe æ. ænanthe*).—Eggs of this species are occasionally found more or less distinctly marked with fine reddish-brown spots. Rey figures an egg of this description unusually boldly marked.

[ISABELLINE WHEATEAR (*Æ. isabellina*).—A clutch ascribed to this species in the British Museum, taken on Mount Hermon in June, 1864, is distinctly spotted, but in

* In the South African genus *Spreo*, eggs profusely marked with red are found as well as the normal blue type.

† These remarks also apply to the Blue Rock-Thrush (*M. solitarius*) in which bird the latter type of egg is normal.

default of confirmation from other sources, should perhaps be accepted with caution.]

REDSTART (*Phœnicurus ph. phœnicurus*).—Clutches in which some or all of the eggs are marked with fine light red spots are not very uncommon, and have occurred in many parts of Great Britain as well as on the Continent. Mr. Bunyard has a particularly fine set in which the red spots form a perfect zone round each egg.

BLACK REDSTART (*Ph. o. gibraltariensis*).—The collection of the late L. Field contained two clutches, one distinctly and the other faintly spotted. The former afterwards passed into the Crowley Collection. (cf. also Kleinschmidt, *J. f. O.*, 1903, pp. 426-28.)

HEDGE-SPARROW (*Prunella m. occidentalis*).—A clutch thickly freckled with light reddish-brown, occurred in the garden of Ashley Rectory, near Market Harborough, about eight years ago (C. Borrer).

RED-RUMPED SWALLOW (*Chelidon d. rufula*).—A clutch of four eggs, now in F. C. R. Jourdain's collection, taken by Mr. F. R. S. Baxendale in Cyprus, shows fine red-brown spots, and Mr. E. G. B. Meade-Waldo states that this type also occurs in Morocco.

HOUSE-MARTIN (*Hirundo u. urbica*).—Spotted eggs are said to have occurred in this species. Mr. F. Norgate has a clutch with fine reddish-brown spots, but in other cases the supposed spots are due to insects. See however *Field*, July 20th, 1907. Mr. W. H. Heathcote records a set with pale red spots at Preston (*Ornithologist*, p. 139). Spotted eggs have also been recorded from the Continent, cf. W. Schuster (*Zeits. f. Ool.*, XII., p. 173, and *J. f. O.*, 1903, p. 29 (note)), etc.

ALPINE SWIFT (*Apus m. melba*).—Girtanner has on two occasions taken clutches of this species with one spotted egg in each, which are now in the collection of Herr G. Krause (cf. *Zeitschr. für Oologie*, XII., 1903, p. 173, and XIII., p. 11).

[EAGLE-OWL (*Bubo b. bubo*).—The marked egg described and figured by Rey (*Eier d. Vögel Mitteleuropas*, p. 70, pl. 122, fig. 3) is now believed by Le Roi not to belong to this species.*

[MARSH-HARRIER (*Circus æruginosus*).—The eggs of this bird rarely show the slightest trace of any markings beyond a few nest-stains.]

* See also Hume and Oates, *Nests and Eggs of Indian Birds*, III., p. 103 (*Bubo coromandus*).

MONTAGU'S HARRIER (*C. pygargus*).—These eggs are sometimes more or less spotted with light reddish-brown. Mr. P. F. Bunyard has a clutch quite as heavily marked as any Hen-Harrier's eggs.

HEN-HARRIER (*C. cyaneus*).—Both British and Continental eggs are frequently freckled with rusty-brown.*

GRIFFON-VULTURE (*Gyps fulvus*).—Although normally this species lays white eggs, specimens are occasionally found, especially in south Spain, which are distinctly spotted with light or dark red. For many years there was a small colony near Malaga from which some extremely well marked eggs were obtained, some of the finest of which passed into the collection of the late Mr. A. W. Johnson. Eggs marked with red are figured by Seebohm, *Hist. Brit. Birds*, pl. 1., and *Col. Fig.*, pl. 1.; Rey, *Eier d. Vögel Mitteleuropas*, pl. 1, fig. 2; and Dresser, *Eggs of the Birds Eur.*, pl. 36.†

GOSHAWK (*Accipiter g. gentilis*).—Occasionally eggs of this species are met with which show distinct red-brown markings. Dr. Ottosson had a clutch of three with large spots (Stockholm Museum), and faintly marked eggs are not uncommon.

[WHITE-TAILED EAGLE *Haliaeetus albicilla*].—A clutch of two eggs in F. C. R. Jourdain's collection, from south Russia, has a few distinct purplish-brown markings with underlying pale ashy spots. Dr. Ottosson also had an egg with markings (*cf.* also Baedeker, *Eier d. Europaischen Vögel*, pl. 57, fig. 2). British-taken eggs appear to be quite white.‡]

PUFFIN (*Fratercula a. arctica*).—An erythristic egg of this species is in the collection of Mr. Goodall.

* The Steppe or Pallid Harrier (*C. macrurus*) apparently normally lays eggs which are marked in this way, some very boldly; but many of the clutches in collections are from south-east Europe, where several species are found breeding together, and in most cases the authentication is very unsatisfactory. Some eggs of *C. melanoleucus* and *C. hudsonius* also show traces of reddish markings.

† The eggs of the Himalayan Vulture (*Gyps himalayensis*) are also sometimes pure white and sometimes more or less spotted and marked with brown. The British Museum collection also contains sparingly marked eggs of *Pseudogyps bengalensis*, *Gyps pallescens*, and *Otogyps calvus*.

‡ The eggs of the Booted Eagle (*Hieraetus pennatus*) are normally white, but occasionally spotted with red, and those of the Spanish White-shouldered Eagle (*Aquila heliaca adalberti*) and Bonelli's Eagle (*Hieraetus fasciatus*), though frequently white, are also found with light reddish blotches and violet shell-marks.

NOTES

UNCOMMON BIRDS IN STAFFORDSHIRE.

A YOUNG drake Gadwall (*Anas strepera*) was shot on January 14th, 1913, at Stretton.

I saw two Knots (*Canutus canutus*) on October 12th, 1913, at Bellfields Reservoir. I watched them for some time through powerful glasses, and when one flew close past me I could distinctly see the grey rump. I believe the only previous satisfactory record of the Knot for Staffordshire is one shot at Tittensor, near Trentham, in December, 1892.

On the night of November 6-7th, 1913, there was a large immigration of many different species, and I saw three Ruffs (*Machetes pugnax*) at Bellfields on the 7th. These birds seem to have stayed there till the end of the month, as I saw them again on the 9th, 16th, 20th, and 29th, after which date I did not go there. I believe there are only two previous records of the Ruff for Staffordshire—one which I saw at Bellfields in 1911 or 1912, and one which was shot at Norton Pool, near Chasetown.

FRANCIS A. MONCKTON.

[The record of the Gadwall is interesting, as there appears to be only one previous occurrence in the county. The Knot has also been recorded from Burton on more than one occasion, and the Ruff has also been shot at Burton (1857) and near Stafford (August 29th, 1910).—F. C. R. JOURDAIN.]

SLENDER-BILLED NUTCRACKERS IN KENT AND SUSSEX.

IN the last issued report of the Migration Committee of the British Ornithologists' Club (*Bull. B.O.C.*, XXXII., p. 251) the occurrences of Nutcrackers in the autumn of 1911 were briefly summarized. Amongst them is included a record of a bird that was obtained at Broome in Kent, in October, and which had not been previously recorded. I first heard of the bird in the following December, and on making inquiries ascertained that it had been picked up in a dying condition, having obviously been shot, at Broome, near Canterbury, and was seen in the flesh by Mr. H. Mead Briggs of that town on October 20th, so that it had most probably been shot a day or two before

that date. After being stuffed it was acquired for the Canterbury Museum. I was unable to prevail upon the authorities of that institution to send me the bird for inspection, and it was not until quite recently that I had an opportunity of going to see it, when I found that, like the birds that occurred in England about the same time, it was a specimen of the Siberian race (*N. caryocatactes macrorhynchus*).

In the *Field* for October 25th, 1913, it is recorded by Mr. W. B. Ellis, of Arundel, who had the bird to stuff, that a Nutcracker had been shot near Pulborough and received by him on October 21st. The Rev. Clifford Toogood, of Burpham, kindly wrote me about this bird, which he saw while in Mr. Ellis's hands, and sent me a careful drawing of the head and bill from direct measurements. From this it appears that this bird is also a specimen of the Slender-billed race; it is a female, and was shot by a Mr. Arlington, on October 19th, 1913.

N. F. TICEHURST.

PIED WAGTAIL REARING TWO BROODS IN ONE NEST.

IN reference to the notes on this subject (*supra*, p. 229), I may state that in the spring of 1913 I found a nest of a Pied Wagtail (*Motacilla a. lugubris*) situated in some creepers growing over a wall. The nest contained one egg and three newly-hatched young. These had flown by June 11th. On July 20th, when I again happened to pass the nest, I was surprised to see one of the old birds going to it with food; there were five young ones, and the nest was in a very dilapidated condition.

M. L. KLEINWORT.

CONTINENTAL COAL-TITS IN KENT.

MR. H. S. D. BYRON, whose assistance I have already had so frequently to acknowledge in connexion with Kent birds, and whose residence in Thanet is so favourably situated for the observation of migrants, has once more been instrumental in adding a new race to the county list. He recently sent me for comparison a Coal-Tit that he had obtained in Dumpton Park, Thanet, on October 26th, 1913. It proved to be, as he suspected, a specimen of the Continental *P. a. ater*. On my returning the bird to him, he compared it with other skins in his possession, and has since written to inform me that amongst these he has found another

that agrees with it and which was obtained in the same place in the spring of 1893, though the actual date he omitted to record.

N. F. TICEHURST.

GREAT GREY SHRIKE IN SUSSEX.

ON January 6th, 1914, a specimen of the Great Grey Shrike (*Lanius e. excubitor*) was shot at Brightling, Sussex, and examined by me in the flesh on the following day. I found it to be an adult female of the form that has only one white wing-bar, generally known as Pallas's Great Grey Shrike.

H. W. FORD-LINDSAY.

INCURSION OF WAXWINGS.

A LARGE number of Waxwings (*Ampelis garrulus*) appear to have visited Great Britain this winter, and we shall be glad to have particulars of date, number, and place of any occurrences known to our readers. The following have been reported:—

YORKSHIRE.—Holderness, November 10, 1913, one received (H.F.W.); flock of thirty or forty seen, of which five were sent to a bird-stuffer at Hull (W. Redfern). Skelton, December 13th, flock of twelve, two shot (T. H. Nelson). Howden, December 20th, one shot (*Field*, 3.I.1914, p. 3). Beverley, late November, party of five (*op. cit.*, p. 89). North Cave, December 21st, flock of six or eight, one shot (W. Redfern).

LINCOLNSHIRE.—North-west district, December 7th, one seen (*Field*, 13.XII.1913, p. 1252).

NOTTINGHAMSHIRE.—Lowdham, December 31st, 1913, one seen (C. E. Pearson).

SHROPSHIRE.—Broseley, January 13th, two seen, one caught (H. E. Forrest).

WORCESTERSHIRE.—Jardley Wood, January 1st, two shot (A. G. Leigh).

NORFOLK.—Westwick, about December 9th, one; Earlham, about December 18th, one; Hethel, about December 23rd, one; near Norwich, about December 23rd, two; Smallburgh, December 27th, two; Northrepps, January 1st, one; Stanfield, beginning of January, two or more reported, and three were received from different places in east Norfolk by Mr. Roberts; Mr. Saunders, of Yarmouth, had eleven to stuff; Fritton, January 9th, one (J. H. Gurney).

MIDDLESEX.—Hampstead, January 11, 1914, one (*Field*, 17.I.1914, p. 139).

ESSEX.—Ingatestone, January 2nd, one (*Field*, 17.I.1914, p. 139).

KENT.—High Halden, December 31st, one shot (J. H. Allchin). Higham, Gravesend, January 7th, two seen (Rev. J. R. Hale).

SUSSEX.—West St. Leonards, January 17th, one picked up alive (N.F.T). Hastings, January 3rd and 7th, three shot; and numerous reports of others in the county (H. W. Ford-Lindsay).

WILTSHIRE.—Swindon, December 31st, one shot (D. P. Harrison).

ABROAD.—Hert F. Tischler records an invasion of Waxwings in East Prussia (*Ornith Monatsber.*, 1914, p. 7) in the autumn of 1913. In Kreise Niederung, Sondermann noticed the first on October 21st, and near Bartenstein Tischler saw a flock of about fifteen, from which he shot one young bird. After this time reports were recorded from the Königsberg district. Not only have Waxwings been numerous but large numbers of Siberian Nutcrackers and Pine Grosbeaks have also been reported. Although the weather up to November was quite abnormally mild at Rossitten, Waxwings, Northern Bullfinches and Redpolls were frequently recorded from October 13th onward at the Vogelwarte, and Pine Grosbeaks in November by Dr. J. Thienemann (*op. cit.*, 1913, p. 194).

BREEDING HABITS OF CUCKOO.

ON June 4th, 1913, I found an egg of the Cuckoo (*Cuculus c. canorus*) perfectly fresh, in a nest containing four young Robins apparently two or three days old. On June 16th, 1910, a Cuckoo's egg was laid in an empty Greenfinch's nest from which I had removed the eggs a week previously. My notes show that of the eggs and young of the Cuckoo found by me in Sussex during the last six years, 43 per cent. were in Robins' nests and 28 per cent. in Hedge-Sparrows'. The earliest date of which I have a record is April 29th, 1909, in a Robin's nest, and the latest July 14, 1908, in a Pied Wagtail's. The eggs were quite fresh in both instances.

R. WARE.

CUCKOOS' EGGS IN NESTS OF HOUSE-SPARROW, TWITE, AND WHEATEAR.

IN 1908 one of my correspondents, Mr. F. W. Peaples, found the nest of a House-Sparrow (*Passer d. domesticus*) in a tree

in the neighbourhood of Bolton, Lancashire. It was a loose and rather bulky structure, containing four eggs of the Sparrow and one of the Cuckoo (*Cuculus c. canorus*). On May 16th, 1909, he visited the same locality, but the trees in which the Sparrows were breeding yielded nothing of interest. Noticing a nest in a hole in the roof of an adjoining building he examined it, and found another Cuckoo's egg, together with four eggs of the Sparrow, which are now in my collection. The nest was profusely lined with white Leghorn feathers and quite open in front, so that the Cuckoo would have no difficulty in depositing the egg.

On another occasion Mr. Peaples found a nest of a Wheatear (*Enanthe æ. ænanthe*) in a little-used lane, with three white eggs. On returning three days later, he was surprised to find that two of the Wheatear's eggs had disappeared and that a Cuckoo's egg had been deposited in the nest.

On another occasion he actually saw a Cuckoo deposit its egg by means of its bill in the nest of a Twite (*Carduelis f. flavirostris*), and hurriedly rushing forward was in time to secure a full set of Twite's eggs, together with the Cuckoo's. Both the latter sets are now in the Bolton Museum.

H. MASSEY.

TENGMALM'S OWL IN KENT.

ON January 2nd, 1914, a pair of Tengmalm's Owls (*Egolius t. tengmalmi*) were obtained at Sandhurst, Kent, and were shown to me in the flesh on January 3rd. As can easily be understood, they had been taken for examples of the Little Owl.

H. W. FORD-LINDSAY.

WINTER-NESTING OF THE BARN-OWL.

THE fact that the Barn-Owl (*Tyto a. alba*) has young occasionally during the winter months has been recorded already. Thus, Waterton says (*Essays on Nat. Hist.*, p. 12, 1838) that, in December, 1823, he found a nest containing young. Nevertheless, the occurrence seems to me sufficiently remarkable to be worth noting whenever observed.

A pair of these birds nests regularly in a hole in one of a row of old elms beside the drive leading up to my house. This hole has held a nest every year, I am told, as far back as anyone can remember. Last year (1912) there were young in the nest, and their loud "snoring" might be heard every evening from June or July up to, at any rate, late September, and, I think, till October.

This summer (1913), however, though the old birds were frequently seen about and heard screeching at night, I was surprised to see no sign of the nesting-hole being used by them. I have an idea that a pair of Little Owls occupied it, but owing to the smallness of the entrance, I could not make sure of this. It was not until quite the end of October or beginning of November, that I first heard young Barn-Owls snoring in the nest; and at the time of writing (29th December) they are still there. Every evening I hear their loud "snoring" from the house—often even as I lie in bed. That they are still actually in the nest-hole I cannot assert: for the reason stated, it is difficult to make sure on this point. Listening below the tree, however, I feel sure that often, at any rate, the noise comes actually from the nest-hole. At all events, it comes always either from the nest-tree or from one or other of two trees which stand adjacent to it; and below these three trees I frequently find both cast pellets and dropped young rats—never mice. The pellets, too, are composed almost entirely of remains of young rats, whereas most other pellets I have examined have been composed mainly of the remains of mice and shrews.

That the "snoring" comes from young birds, I feel no doubt. I believe that the young alone snore. Sharpe and Dresser's statement (*Birds of Europe*, V., p. 246) that the adult both screeches and snores, and that occasionally the young in the nest also snore, seems to me incorrect. According to my experience, the young, whilst in and about the nest, *always* snore. The adults may do so at times, but I doubt it. In any case, I still often hear the old birds screeching round the house.

Considering the sheltered nature of the Barn-Owl's usual nesting-site, and the fact that (except during severe frosts) its food-supply is probably fairly equal the year round, it seems probable that this bird experiences fewer inconveniences than most birds would from nesting during winter. Yet, even so, there seems little to account for its doing so from time to time.

MILLER CHRISTY.

[The assertion in the *Birds of Europe* is, of course, incorrect; but the article in question is evidently not written on personal knowledge, and contains other equally inaccurate statements, as, for example, that it "raises several broods in the year," and is "strictly nocturnal" in habits. Records of Barn-Owls with young in November in Norfolk will be found in the *Zoologist*, 1908, p. 133, etc., and similar cases have also been recorded from the Continent.—F. C. R. JOURDAIN.]

CURIOUS MISHAP TO KESTREL'S EGGS.

ON May 17th, 1913, my friend, the Rev. D. A. Scott, and I visited the eyrie of a Kestrel (*Falco t. tinnunculus*) in a rock, of which he knew. The bird flew off. On getting to the eyrie I found rather a remarkable state of affairs. The five eggs were embedded in a mass of pellets, as shown in the accompanying photograph, and the bird was incubating them in this extraordinary position. Mr. Scott visited the site again on May 27th and found that two of the five



NEST OF KESTREL SHOWING EGGS EMBEDDED IN REMAINS OF
PELLETS.

eggs were entirely covered, one of them to the depth of half an inch, and only a very small portion of the other three could be seen. The site had been occupied in other seasons, and as it was somewhat sheltered, no doubt a certain amount of fragments of pellets from previous years had remained on the ledge; these, and those ejected shortly before and after the eggs were laid, had doubtless been softened by rain and the eggs had sunk into them. The covering process would be assisted by pellets ejected as incubation progressed.

I visited the place after the nesting-season and found the remains of the eggs lying broken in the eyrie. It is curious to note that the bird apparently made no effort to keep the eggs free from the surrounding material.

ERIC B. DUNLOP.

WOOD-PIGEON SWALLOWING POTATOES.

THE potatoes shown in the accompanying illustration were found in the crop of a Wood-Pigeon (*Columba p. palumbus*) shot at Crosby, near Liverpool. From the size of the



POTATOES FROM CROP OF WOOD-PIGEON (*nat. size*).

potatoes it would seem almost impossible for a pigeon to swallow them. I have shot a great number of these birds and have never before found their crops to contain potatoes.

A. W. MARRIAGE.

[Almost anything is credible of a bird which can hold 1,020 grains of corn in its crop or 144 field-peas and 7 large beans (*cf. Yarrell*, 4th ed., Vol. III., p. 4). Collinge (*Food of Birds*, p. 67) quotes potatoes as having occurred on 27 occasions, 94 specimens having been identified.—EDS.]

BAER'S POCHARD IN NOTTINGHAMSHIRE.

ABOUT the middle of April, 1911, a man saw three ducks on the Trent, and killed them all with one shot. He took them to Rose, taxidermist of Nottingham, who gave him sixpence each for them. Taking one to be a variety of the Tufted Duck he preserved it for me, and ate the others, which were Tufted Ducks. When I saw this bird I said it was not a Tufted Duck but a Ferruginous Pochard. It was cased and placed in my collection, where many saw it, but it was not until one day in July, 1913, that the Honourable Gerald Legge saw it and informed me that it was a Baer's Pochard (*Nyroca baeri*), a very rare bird, only one other having been killed in England, and that at Tring.

J. WHITAKER.

[The fact that ducks of many kinds are nowadays constantly put down on ornamental waters unopinioned, with

only the wing-feathers clipped and with no ring or other mark upon them, makes it impossible to accept such records as Mr. Whitaker's as those of genuine wild-birds. The Duchess of Bedford informs us that specimens of Baer's Pochard with clipped wings have been put down recently at Woburn without Her Grace's knowledge, and although it seems very improbable that Mr. Whitaker's bird could have originated from Woburn, it is quite possible that other examples, perhaps unidentified, have been imported and put down elsewhere. For these reasons we think it inadvisable to admit this species to the British List.—EDS.]

HAS THE COMMON SANDPIPER A WINTER-MOULT ?

It may be of interest to record the fact that two Common Sandpipers (*Tringa hypoleuca*) in my aviaries have recently completely moulted their rectrices. They are young birds, bred in Yorkshire last summer. The female began to cast the outer rectrices at the commencement of December, and at intervals during the following fortnight cast all but three. By January 1st she again had a full tail. The male commenced to moult a fortnight later, and has now (January 15) a full tail, though the rectrices are still not quite all of equal length.

I should be interested to hear if there is any record of a winter moult of this species. Many migratory species moult in February, in their winter-quarters, but a December moult seems unusual. Of course many ornithologists regard the moulting of birds in captivity as abnormal, but I should like to point out that, apart from the easily recognized forms of "soft moult," birds in captivity may sometimes have less than a normal moult, but rarely, if ever, more. A distinct moult, therefore, occurring in several individuals in a state of captivity, has presumably some counterpart in the history of the species in a state of freedom.

W. E. TESCHEMAKER.

[It seems to me impossible to say whether a moult in captivity is normal or not unless we know what happens in the wild bird. I do not know to what extent the Common Sandpiper moults in spring, nor whether the juvenile moults its tail in the autumn, but some waders moult their tails and wings in spring and some juvenile waders moult their tails as well as their body-plumage in their first autumn. It seems therefore that in Mr. Teschemaker's birds the moult of the tail may have been either delayed or accelerated by artificial conditions.—H.F.W.]

PUFFIN IN BERKSHIRE.

A PUFFIN (*Fratercula a. arctica*) found at Stanford Dingley, Berkshire, on December 6th, 1913, two days after a gale from the south-west, was brought to me alive on December 8th. It was not at all emaciated, and had probably come in contact with a tree. Four records of this species are given in the *Victoria History of Berkshire*, and Mr. Heatley Noble tells me he has not heard of any others since.

NORMAN H. JOY.

[For two other records see BRITISH BIRDS, V. p. 197.—EDS.]

LITTLE BUSTARD IN SUSSEX.

ON December 27th, 1913, an example of the Little Bustard (*Otis tetrax*) was obtained at Icklesham, Sussex. I examined it in the flesh on the following day, and found it to be a male, in splendid condition.

H. W. FORD-LINDSAY.

FLEAS IN OLD NESTS OF BIRDS.

ON December 17th, 1913, on raising the lid of a nesting-box in which a Blue Tit nested last year, I found the old nest to be swarming with fleas. On the trunk of the tree to which the nesting-box was affixed were also numbers of fleas, apparently basking in the sun (which was shining brightly at the time) and ready in an instant to jump upon any bird-host that by chance alighted near them on the tree. This was exemplified by the ready way in which a number of the fleas jumped upon my hand when placed near them. The Hon. N. Charles Rothschild has kindly identified sixty of these fleas as *Ceratophyllus gallinæ*, a species found on many birds. There were altogether over two hundred fleas in this old bird's nest, and also a number of larvæ of a small moth (probably one of the "clothes moths") and of a small beetle, and these were apparently feeding on the decaying vegetable matter of which the nest was composed. On January 7th, 1914, an old Robin's nest in a nesting-box was found to be similarly infested with fleas.

JOHN R. B. MASEFIELD.

SONG OF THE WILLOW-TIT.—Mr. S. E. Brock makes, in the *Scottish Naturalist* (1913, p. 283), some interesting remarks about the song of the Willow-Tit (*Parus a. kleinschmidti*) as observed in West Lothian. Mr. Brock describes

the song as a single note, repeated in a loud, clear tone some five or six times in succession, and having some resemblance to a common song-note of the Wood-Warbler. This description Mr. Brock thinks coincides very nearly with the first of those given by Mr. C. J. Alexander (*antea*, IV., p. 147) for the Marsh-Tit, and is unlike the song of the Willow-Tit as described by the same writer. On the other hand, Mr. Brock states that the plaintive alarm-note "tzing-tzing-tzing," which is characteristic, is the most prominent of the other notes uttered by the bird.

MELODIOUS WARBLER AND INDIAN STONECHAT ON THE ISLE OF MAY.—A female example of *Hypolais polyglotta* is recorded by the Misses E. V. Baxter and L. J. Rintoul to have appeared on the Isle of May on September 27th, 1913 (*Scot. Nat.*, 1913, p. 273). This is the first record of the occurrence of the species in Scotland.

On October 10th, 1913, "a most unusual-looking Stonechat," at first sight looking "more like a small Whinchat than anything else," was noticed and procured by the same observers. The bird has been submitted to Dr. Hartert, who has pronounced it to be an example of *Saxicola t. indica*, which has only once before been recorded from the British Isles—namely, near Cley, Norfolk, on September 2nd, 1904.

LATE STAY OF HOUSE-MARTIN IN STAFFORDSHIRE.—Mr. F. A. Monckton reports a single House-Martin (*Hirundo u. urbica*) at Stretton Hall, near Stafford, on November 23rd, 1913.

LITTLE OWL BREEDING IN HAMPSHIRE.—In the *Zoologist* (1913, p. 149) Mr. G. B. Corbin mentions that Little Owls (*Athene n. noctua*) nested in several fresh localities near Ringwood in 1912. Mr. P. W. Munn informs us that Mr. Corbin saw young ones taken from a nest near Ringwood in 1911, and that he has been aware of the nesting of the bird on the west side of the Avon for some time. This is a decided westward extension of the bird's known nesting-range.

GLOSSY IBIS IN ARGYLLSHIRE AND NORFOLK.—Mr. C. Kerr Harris records (*Scot. Nat.*, 1913, p. 284) that a specimen of *Egatheus f. falcinellus* was killed by a boy on the Island of Lismore, on October 13th, 1913. Mr. B. Dye writes (*Zool.*, 1914, p. 37) that a specimen was shot at Acle, near Yarmouth, on October 28th, 1913.

RED-NECKED PHALAROPE BREEDING IN TIREE.—In the course of a series of papers on "The Birds of the Island of

Tiree," which Mr. P. Anderson has been contributing to the *Scottish Naturalist* (1913), it is mentioned (p. 220) that a few pairs of *Phalaropus lobatus* arrive regularly in Tiree about the last week in May and remain to breed. Mr. Anderson does not state when they first visited the island, but in a paper on the same subject by the same author, published in our contemporary in 1898, the bird is not mentioned at all. Presumably, therefore, this is an acquisition to the birds breeding in the Inner Hebrides.

REPORTS OF QUAILS.—With reference to the note on p. 238, Mr. W. Wells Bladen writes that early in September, 1913, Mr. W. E. Pickering, shooting near Newport, Salop, saw a bevy of young Quails, while on October 14th he saw several Quail, and on the 22nd one, in the same field. Mr. H. E. Forrest writes of three other nests in Shropshire in 1913, two at Ellesmere and one at Stanton-on-Hine, and that a Quail was heard calling at Allerbury on August 15th.



REVIEWS



British Diving Ducks. By J. G. Millais, F.Z.S., M.B.O.U.,
Vol. II. Seventeen coloured and twenty-five uncoloured
plates. Longmans. In two volumes, £12 12s. net.

IN our last volume (pp. 365-70) we gave an extended notice of the first part of Mr. Millais's beautiful work on the Diving Ducks. In this second and concluding volume Mr. Millais discusses the Eiders, Scoters, and Mergansers, and gives chapters "On the various Methods of Shooting Ducks," and "On the Rearing of Ducks for Shooting and the keeping of Ornamental Waterfowl in confinement."

There are many beautiful coloured plates in this volume by Messrs. Thorburn (adults in full plumage), Millais (adults and soft parts), Murray Dixon (eclipse plumages), and Grönvold (eggs and young in down). The author also contributes black-and-whites of courtship and other scenes, while a large number of other black and white plates are devoted to photographs of skins to show sequences of plumages. With regard to the latter, we think it would have been more useful to the student had the photographs been fewer and on a larger scale. We cannot either approve of Mr. Millais's plan, adopted throughout this work, of stating the supposed exact age of each bird. This is fixed merely on the supposition that all the birds of any one species hatched in any particular year are born on the same date! Mr. Millais carries this method to absurdity when he states, for instance, that the King-Eider attains the adult-plumage when it is $28\frac{1}{2}$ months old. Other confusing consequences of this method are that birds of a supposed certain number of months old are described often when they are half in one plumage and half in another, and the figures in the plates are arranged according to the supposed ages of the specimens instead of according to the plumage they are in. What we require is to have a description of each plumage through which the bird passes and this is by no means clear from Mr. Millais's descriptions, as many who have been working at the subject have already discovered. It seems a pity that so fine a work full of such good material should not have been arranged in this respect on a more scientific and at the same time more useful plan.

On the other hand, Mr. Millais's arrangement of the distributional details is excellent, and his accounts of the

habits, especially the courtship displays, some of which have not been previously described, are full and interesting. The chapter on shooting will be read with delight by all those who are keen in the pursuit of ducks, whether for sport or collecting. The details given in the chapter on rearing ducks (founded chiefly on Sir Richard Graham's experiments at Netherby) will be of value to those who enjoy this form of sport, and will provide food for reflection to those of us who disapprove of the interference of the natural distribution of birds, which must inevitably be the result of such methods.

On page 2 Mr. Millais separates the British Eider as a new subspecies under the name of *Somateria mollissima britannica*, which he says is smaller than the typical form and the Norwegian bird, but in his table of measurements on page 4 there appears to be no difference in the measurements of these three "forms" (measurement of total length cannot, of course, be accepted as a character since it depends upon how much the bird has been stretched out!). Mr. Millais also says that the colouring of the bills of the adult males appears to differ, but this supposed distinction is not clearly set out, the colours being given as: *British*—dull olive-green above, shading into French blue-grey below, and again into pale yellowish near the nail; *Typical form*—olive-green; *Norwegian*—green. On the evidence brought forward it is not possible to accept as distinct from the typical form either the British or the Norwegian birds.

In conclusion, we must again draw attention to the plates, which are a notable feature of the work. They are not only numerous and varied, both in subject and treatment, but they are on the whole beautifully executed, though those in the second volume are not, we think, quite up to the high standard set in the first volume.

H.F.W.



LETTERS



ERYTHRISM IN THE EGGS OF THE DARTFORD WARBLER.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to the article on “The Breeding-habits of the Dartford Warbler,” and to the statement on page 218, I have never seen a Dartford Warbler’s nest in England, and know nothing of their habits in this country. In the south of Spain erythrism occurs in a large number of cases: birds were shot from the nests or caught on them. On the other hand, I have not yet seen a red or pink egg in an authentic nest of the Sardinian Warbler.

HEATLEY NOBLE.

HENLEY-ON-THAMES.

To the Editors of BRITISH BIRDS.

SIRS,—In my paper on the Dartford Warbler in your last issue, I threw some doubt on the authenticity of the erythristic eggs (red variety) of this species from the Continent, and suggested that some at least probably belonged to the Sardinian Warbler. At the time those notes were written I was unable to trace a collector of known repute who had actually taken erythristic eggs of this species on the Continent. I have, however, quite recently in conversation with Mr. F. C. Selous, placed all doubt on the question at rest. He informed me that he, with Mr. J. P. C. Musters, found several nests of the Dartford Warbler in Spain containing erythristic clutches, all of which were carefully identified at the time.

I may here mention that on p. 218, line 6, “at the large ends” should read “at the *small* ends.”

P. F. BUNYARD.

CROYDON, *January* 20th, 1914.

[For further details of erythrism in the eggs of both the Dartford and Sardinian Warblers, see *supra*, pp. 252-3.—EDS.]

WOODPECKERS EATING FRUIT.

To the Editors of BRITISH BIRDS.

SIRS,—Mr. Gillman’s note in the January number of *BRITISH BIRDS* (p. 242) is the first mention I have come across of a Green Woodpecker eating apples. My friend the late Rev. T. W. Daltry, who was well acquainted with all our wild birds, reported to me in 1891 that during December, 1890, and January, 1891, a Green Woodpecker (*Picus v. pluvius*) paid daily visits to his garden at

Madeley Vicarage, Staffordshire, to feed on the berries of the *Pyracanthus* growing against a wall of his house. The winter of 1890-1 was a severe one, and the bird was probably driven to feed on these berries owing to lack of insect-food, and this was no doubt the case with Mr. Gillman's bird. The cutting down of our woods, and especially the clearing away of decaying trees in recent years, is the cause of the diminution in numbers of the Woodpeckers in many districts. I find that Yarrell and other authorities mention hazel-nuts and acorns as food of these birds.

J. R. B. MASEFIELD.

CHEADLE, STAFFS., *January 12th*, 1914.

To the Editors of BRITISH BIRDS.

SIRS,—In reference to Mr. Arthur Gillman's letter (*supra*, p. 242) describing the eating of apples by Green Woodpeckers, I think the following may prove of some interest :—

In the early part of this autumn I noticed, on several occasions, a Great Spotted Woodpecker (*Dryobates m. anglicus*) in a crab-apple tree. One day I walked up to the tree and found the ground at the base of the trunk, and not further out, littered with crab-apples, all of which had been split in half and the pips extracted, but the fruit itself not eaten. A possible explanation is, I think, that the Great Spotted Woodpeckers had taken the apples and then, whilst holding them against the tree-trunk, had split them, extracted the pips, and then dropped the fruit.

I know, from keeping these birds in an aviary, that they will fly away with food, such as a biscuit, and hold it between their bodies and a tree-trunk or a branch, while they break it up and eat it.

PHILIP GOSSE.

BEAULIEU, HANTS., *January 1st*, 1914.

HERRING-GULLS DIVING.

To the Editors of BRITISH BIRDS.

SIRS,—Referring to what is said on this subject in the last two issues of *BRITISH BIRDS*, I suppose it is scarcely necessary to point out to your readers, resident in London, that the Black-headed Gulls (adult and immature) now frequenting the water opposite Buckingham Palace may often be seen to dive in the manner described by Mr. S. G. Cummings, except that these Gulls do not submerge the tips of their primaries.

GREGORY HAINES.

ARTHOG, NEAR DOLGELLY, *January 6th*, 1914.



Fig. 1. COMMON GULL: TO SHOW ATTITUDE ONE.



Fig. 2. COMMON GULL: TO SHOW ATTITUDE TWO.

(*Photographed by Miss M. D. Haviland.*)

BRITISH BIRDS

EDITED BY H. F. WITHERBY, F.Z.S., M.B.O.U.

ASSISTED BY

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THE COURTSHIP OF THE COMMON GULL.

BY

MAUD D. HAVILAND.

(PLATE 17.)

ON May 9th, 1913, I found a colony of about twenty pairs of Common Gulls (*Larus c. canus*) nesting on a small island in a freshwater loch in the Outer Hebrides. The islet was occupied also by about the same number of pairs of Black-headed Gulls (*Larus ridibundus*) and in many cases the nests were side by side. Later on, however, I noticed that the Common Gulls were fond of building in long, thick heather, while for the most part the Black-headed Gulls preferred more open situations near the water's edge.

On May 9th, a few nests contained eggs, but the greater number of the birds were courting. The mating of the Common Gull, like that of most other species, can be divided into two parts : (a) the challenging of the cock bird to his peers, and (b) the actual wooing of the female. So far as I could ascertain, however, it would be difficult to draw an arbitrary distinction between the performances in this case. Judging from the procedure of a dozen birds, which from their behaviour I took to be males, the sequence was as follows : The bird stood upon some prominent perch and called vociferously for some minutes. I do not know whether the coloration of the inside of the mouth plays any part in sexual selection in this species, but the bill is often opened to an extent quite disproportionate to the volume of sound emitted. This is shown in fig. 1.

Sometimes the bird broke off here ; if not he went on to utter a deep rasping note, which was given as if with great effort. The bill was nearly closed, and the head and neck were stretched out stiffly (fig. 2). It seemed to me that although far less noisy than the previous performance this was more of a challenge. In three

cases the result was that the bird on the stone was swooped at and buffeted by another, but I only once saw a bird struck while behaving as in fig. 1.

The third performance took place upon the ground, among the long grass and raspberry canes which grew upon the island. Two male birds walked side by side,



Fig. 3. COMMON GULL: TO SHOW ATTITUDES ONE AND THREE.
(*Photographed by Miss M. D. Haviland.*)

as closely as though they had been coupled together, with their heads drawn in, as shown in the bird in the foreground of fig. 3. The leg was bent until the tarsus was almost on the ground, the whole body was stiffened, and the bird uttered a curious guttural note. While walking thus, the Gulls followed certain definite tracks or runs in the herbage, but whether these runs were made by these repeated promenades, or whether they simply chose them as the easiest places to walk in, I cannot say. I twice saw the male bird assume this attitude before another bird which subsequently proved to be a female, but I never saw a female act thus.

I repeatedly saw the cock birds go through a fourth performance, but was never near enough to photograph them in the act. It invariably preceded the successful consummation of the courtship : I never saw it on any other occasion. The male bird, crouching in front of the female, jerked his head upwards spasmodically, while he uttered a high-pitched note, something like the creaking of a gate-hinge, only more musical.* The hen birds treated the cocks with great indifference, but I never saw them refuse a male bird which had been through the performance just described.

I am inclined to think that there must be a fifth phase of courtship between those which I have here designated three and four, but if there was I did not distinguish it. The courting only went on in the forenoon. Later, the birds scattered over the loch to sun themselves and fish. The Common Gull is a confirmed egg-stealer, and I several times saw birds smash and suck the eggs of some of the Black-headed Gulls round them.

The Common Gull was not very abundant in the district. Besides the colony described above, we only found one small breeding-station among some sand-dunes four miles higher up the coast. There was, however, a great colony of Herring- and Lesser Black-backed Gulls on one island in one of the inland lochs, and amongst these I distinguished some Common Gulls. I was not able to land upon this island, however, and elsewhere the Common Gull was not nearly so abundant a breeding species as the Herring-Gull.

* I have seen a young Herring-Gull go through an almost similar performance in the late summer when begging for food from an adult.

NOTES ON THE BIRDS OF WILTSHIRE.

BY

G. BATHURST HONY, M.B.O.U.

SINCE the appearance of the Rev. A. C. Smith's *Birds of Wiltshire* in 1887 many new county records have naturally occurred. I now propose to give the more interesting of those I have collected, some of which have been published before, but many of which are now published for the first time. Perhaps the presentation of these in a collected form may cause other records to be brought to light.

Smith records the occurrence of 235 species, but he was too wont—to use his own words—to “give the prisoner the benefit of the doubt.” For the present, the following nine species must be placed in brackets as being admitted on insufficient evidence, or not being genuine wild birds, though facts may come to light which will put some of them on a sound footing.

UNSATISFACTORY RECORDS ADMITTED IN SMITH'S *Birds of Wiltshire*.

[BLACK WOODPECKER (*Dryocopus m. martius*).—Our Wiltshire specimen seems to be better authenticated than any other English record. It is in the collection formed by the late Mr. James Rawlence, at Bulbridge, Wilton; he received it from Mr. Pope, of Kingston Deverill Farm, who said it was killed during rook shooting at Longleat Park. The exact date is unknown, but the brother of the present owner, writing to *The Standard* of September 30th, 1897, says: “I hunted up the son of the late Mr. King, who stuffed the bird in our collection, and he informs me that as a lad he has a very clear recollection of the bird coming to his father in the flesh for preservation from Longleat . . . it made a great impression on both his father and him.” This specimen does not appear to have been known to either Howard Saunders or J. H. Gurney.]

[GOLDEN-WINGED WOODPECKER (*Colaptes auratus*) was not accepted by Newton in *Yarrell* (II., 486). The recent *Hand-List of British Birds* says, “the specimen said to have been shot in Wilts in 1836 was no doubt due to importation.”]

[DESERT BUZZARD (*Buteo b. desertorum*) was not admitted by Saunders (*Manual*, p. 322).]

[CANADA GOOSE (*Branta c. canadensis*), EGYPTIAN GOOSE (*Chenalopez ægyptiacus*), and SPUR-WINGED GOOSE (*Plectropterus gambensis*) were undoubtedly escaped birds.]

[KING-EIDER (*Somateria spectabilis*) was included on the strength of the following note from the Rev. G. Marsh: "The King Duck in my collection was killed in Wilts." This evidence is certainly not sufficient as no other data is known.]

[CAYENNE RAIL (*Aramides cayennensis*) was obviously an escaped bird, and was included against the advice of Prof. Newton, in spite of the fact that the author states in his preface: "to whose (Prof. Newton's) opinion, on all matters relating to birds, I have long been accustomed to bow with implicit obedience."]

[CAPERCAILLIE (*Tetrao u. urogallus*) was undoubtedly an escaped bird.]

ADDITIONAL SPECIES.

There are ten additions to the county list, thus making the new total 236. In the following pages *M.C.N.H.* and *W.A.& N.H.* are used to represent the *Marlborough College Natural History Report* and the *Wiltshire Archæological and Natural History Magazine* respectively.

WHITE WAGTAIL (*Motacilla a. alba*).—I saw one at Woodborough on April 26th, 1912 (*Bull. B.O.C.*, XXXII). It is probably usually present on migration but overlooked.

BRITISH WILLOW-TITMOUSE (*Parus a. kleinschmidti*) was recorded by C. J. Alexander from Little Bedwyn (*Brit. B.*, IV., p. 147).

FIRE-CRESTED WREN (*Regulus ignicapillus*).—Mr. J. G. Millais tells me that when at Marlborough College, he shot a fine male with a catapult in Savernake Forest on Oct. 10th, 1881. It is now in his collection.

WOODCHAT-SHRIKE (*Lanius s. senator*).—There are no less than four records of this bird having been *seen* in the county. One in Savernake Forest on June 6th, 1884, and one near Salisbury in 1872 (*M.C.N.H.*, 1888). One was seen at Wishford on May 31st, 1898 (*Field*, Aug. 24th; the editor doubted this record). Finally the Rev. Percy Harrison saw one near Aldbourne on June 13th, 1906 (*W.A.& N.H.*, XXXV., p. 150). The first of the above records was of a bird seen by Mr. H. A. Macpherson. He made (at the time) a rough sketch of it in coloured chalks, which he found corresponded exactly with the plate in Dresser's *Birds of Europe*.

MARSH-WARBLER (*Acrocephalus palustris*).—A full account of the nesting of this bird near Stapleford, in 1900, was given by Mr. H. S. Hall in the *Zoologist* for Dec., 1900. It has also almost certainly bred near Marlborough for two or three years.

GREENLAND FALCON (*Falco r. candicans*).—Lord Radnor—at Dr. Penrose's request—recorded an immature example which was shot near Downton in April, 1906 (*W.A. & N.H.*, XXXVI., p. 487).

VELVET-SCOTER (*Oidemia f. fusca*).—One was shot at Mildenhall (near Marlborough) by Mr. Barnes on October 28th, 1885 (*M.C.N.H.* 1885); and a young bird was shot by Mr. Dell near Marlborough Mill on October 14th, 1889 (*ib.* 1889).

FULMAR PETREL (*Fulmarus g. glacialis*).—An immature specimen was picked up near Marlborough during a storm in Oct., 1897 (*M.C.N.H.*, 1897).

[LITTLE STINT (*Erolia m. minuta*).—"One seen Feb. 9th, 1886" (*M.C.N.H.*). This evidence is certainly not sufficient to include it.]

[YELLOWSHANK (*Tringa flavipes*).—"A specimen, shot by Mr. Carey Coles at Winterbourne Stoke, in 1908, has been preserved by Mr. White, and is now in the possession of Mr. Carey Coles" (*W.A. & N.H.*, XXXV., p. 508). At my request Mr. E. A. Rawlence (who wrote the above note) took this specimen to the British Museum, and on examination by Mr. Ogilvie-Grant, it turned out to be an undoubted Redshank.]

IVORY-GULL (*Pagophila eburnea*).—Mr. E. Cambridge Phillips tells me that one was killed near Chippenham about 1840 and was the gem of the late Dr. Burly's collection at Chippenham.

[POMATORHINE SKUA (*Stercorarius pomarinus*).—Mr. H. W. Robinson tells me that he saw a skua in a farmhouse near Malmesbury (Common Wood, Sherstone, Malmesbury, Mr. S. Brain is the farmer) which he took to be this bird. It was shot there twenty or thirty years ago. As Mr. Robinson was not quite certain of the identification from the glimpse he got of it, I give the address in case any reader might be able to call and see the bird.]

LONG-TAILED SKUA (*Stercorarius longicaudus*).—Mr. J. Ward (late of Blackland) tells me that one was picked up dead at Calstone in May, 1881. On skinning it he found shot marks in it. I have seen the bird in his collection.

ADDITIONAL BREEDING SPECIES.

There are not many new breeding-records for the county, but those recorded are of some interest. The nesting of the Marsh-Warbler has been mentioned above.

TREE-SPARROW (*Passer m. montanus*).—A nest with two eggs on May 14th, 1890 (*M.C.N.H.*, 1890).

BLUE-HEADED WAGTAIL (*Motacilla f. flava*).—A full account of its breeding at Marlborough in 1907 was given in *BRITISH BIRDS*, I., p. 89. It nested again in the same place in 1909 (*M.C.N.H.*, 1909).

DIPPER (*Cinclus c. britannicus*).—*Vide antea*, p. 230.

[PIED FLYCATCHER (*Muscicapa hypoleuca*).—Dr. Hammond Hinton tells me that he took two eggs out of a clutch of six at Warminster in 1884. The nest was built in a hole in a foreign poplar.]

[COMMON SANDPIPER (*Tringa hypoleuca*).—Mr. G. Dent writes : “ Probably breeds on the Kennet (near Marlborough) ; it is seen every spring, and this year (1912) my brother saw the old birds with young only just able to fly.”]

REDSHANK (*Tringa totanus*).—Nested at Downton, 1907 (*W.A. & N.H.*, XXXV., p. 150).

ADDITIONAL RECORDS OF RARER VISITORS.

We now come to the records of rare visitors since (or unknown to the author of) the *Birds of Wiltshire*.

GOLDEN ORIOLE (*Oriolus o. oriolus*).—Dr. Hinton writes that it “ has been seen in Great Ridge Wood near Hindon more than once ” ; while Mr. Talbot described to me a *pair* of birds seen at Lacock Abbey in May, 1913, which must have been the present species.

LESSER REDPOLL (*Carduelis l. cabaret*).—Three breeding-records have been published (*M.C.N.H.* 1905 ; *Brit. B.*, III., p. 161 ; *Field*, June 15th, 1912), and Dr. Hinton tells me that he took eggs near Warminster, “ when I was a boy ” (about 1885).

CROSSBILL (*Loxia c. curvirostra*).—One shot at Rockley on Dec. 7th, 1889 (*M.C.N.H.*), and another at Bowden Hill in Jan., 1904. Small flock seen at Littlecote in Dec., 1909, (*Brit. B.*, III., p. 305), and a flock of twenty was seen in Savernake Forest in March, 1910 (*M.C.N.H.*).

SNOW-BUNTING (*Plectrophenax nivalis*).—Mr. Rawlence tells me of two shot at Bishops Down about 1908 ; the “ fine

specimen" recorded from Winterbourne Stoke (*W.A. & N.H.*, XXIV., p. 130) turns out to be a semi-albino Corn-Bunting!

GREAT GREY SHRIKE (*Lanius e. excubitor*).—There is a specimen shot at Wylye (no date) in the Blackmore Museum at Salisbury.

WAXWING (*Ampelis garrulus*).—A pair were seen and the male was shot at Downton on Dec. 24th, 1903. It is now in the Blackmore Museum (*W.A. & N.H.*, XXXIV., p. 340). One was shot at Swindon on Dec. 31st, 1913, *vide antea*, p. 264.

PIED FLYCATCHER (*Muscicapa h. hypoleuca*).—Frequently reported on migration, usually in spring.

RING-OUZEL (*Turdus t. torquatus*).—Often on migration. [A nest with eggs and young was reported as having been found near Marlborough in 1887, and another with eggs in 1901 (*M.C.N.H.*); but I am told on good authority that the second (and possibly also the first) of these records was based on a partially white Blackbird.]

BLACK REDSTART (*Phoenicurus o. gibraltariensis*).—Mr. J. G. Millais tells me that he saw a fine adult male on the Downs near Marlborough in the spring of 1881. A young male was seen at Downton on March 13th, 1910 (*W.A. & N.H.*, XXXVI., p. 488, and *Brit. B.*, III., p. 368). One was seen near Britford on Nov. 6th, 1912 (*W.A. & N.H.*, XXXVIII., p. 107).

DIPPER (*Cinclus c. britannicus*).—Frequently reported in winter.

HOOPOE (*Upupa e. epops*).—One was seen near Marlborough in Dec., 1878 (*M.C.N.H.*); Dr. Hinton tells me of one shot near Warminster in 1881; one was shot near Trowbridge in April, 1909 (*Devizes Gazette*, May 3rd, and *Field*, May 26th, 1900); Mr. J. Wild tells me that one was seen at Lacock some years ago, and that one was shot at Eddington about thirty years back.

LITTLE OWL (*Athene n. noctua*).—I have records of fourteen since 1907; it is fast spreading into the county.

SCOPS OWL (*Otus s. scops*).—There is a specimen in the Devizes Museum (mounted on the head of a Ruff!) labelled "Shot at Marlborough."

ROUGH-LEGGED BUZZARD (*Buteo l. lagopus*).—"One Overton 1866" (*M.C.N.H.*); a young male was trapped at Fonthill at the end of Dec., 1884 (*Field*, Jan. 3rd, 1885); Mr. A.

Banks writes that a female was killed in the same place on Feb. 18th, 1885, and there is a specimen in the Devizes Museum shot on the Hurdecott Estate (no date).

COMMON BUZZARD (*Buteo b. buteo*).—Mr. A. Banks tells me that a male was killed in Ridge Wood, Hindon, on September 16, 1887. One was shot at Aldbourne in October, 1911, and there is a pair in the Devizes Museum from Savernake (no date).

WHITE-TAILED EAGLE (*Haliaeetus albicilla*).—One was seen at Salisbury on January 31st, 1897 (*Salisbury Journal*, Feb. 6th, 1897). One was shot in Grovely Wood in March, 1905 (*Wilts County Mirror*, May 3rd, 1905), and another at Marden on February 24th, 1909—now in the Devizes Museum (*Marlborough Times*, March 6th, 1909, etc.).

MONTAGU'S HARRIER (*Circus pygargus*).—One was seen near Braydon on October 28th, 1905 (*W.A. & N.H.*, XXXIV., p. 434). In the Devizes Museum there is a case containing a female and a young bird shot on the Hurdecott Estate—no date (reported in *W.A. & N.H.*, XXXVI., p. 486, as a male Marsh-Harrier); and another containing a male shot near Winterslow, in 1858.

HEN-HARRIER (*Circus cyaneus*).—One was shot on Erchfont Downs on Dec. 30th, 1879 (*M.C.N.H.*), and one was seen at Downton on April 29th, 1912 (*Bull. B.O.C.*, XXXII.).

KITE (*Milvus milvus*).—A male was shot at Fonthill in Nov., 1896 (*Field*, Nov. 28th, 1896), and there is a specimen in the Blackmore Museum shot at Cholderton (no date).

HONEY-BUZZARD (*Pernis a. apivorus*).—A specimen in the Devizes Museum was shot in the West Woods near Marlborough in 1885. This is supposed to be the specimen recorded by Smith (*Birds of Wiltshire*, p. 91), but he gives the date as 1855.

LITTLE BITTERN (*Ixobrychus minutus*).—Mr. E. Cambridge Phillips writes that "a male was killed at Whetham, near Calne, and until recently was in my brother's collection at Chippenham."

BITTERN (*Botaurus s. stellaris*).—I have records of no less than twenty-three, of which twenty are of later date than Smith's book; viz. five in 1892, one in 1897, seven in 1900, three in 1902, one in 1903 and three in 1908.

SHELD-DUCK (*Tadorna tadorna*).—A male was seen at Potterne in the winter of 1897 (*W.A. & N.H.*, XXIX, p. 197).

GADWALL (*Anas strepera*).—One was shot on Jan. 7th, 1893, near Stockton House on the Wylye (W.A.& N.H., XXVII., p. 184).

GARGANEY (*Anas querquedula*).—A pair were seen at Downton on April 15th, 1911, and on April 28th, 1912 (*Bull. B.O.C.*, XXX. and XXXII.).

SHOVELER (*Spatula clypeata*).—Mr. Rawlence tells me of one shot at Bishopstone about 1904.

TUFTED DUCK (*Nyroca fuligula*).—Mr. Ward mentions that one was shot on the Avon near Lacock in January, 1901, and one was seen near Stichcombe on April 2nd, 1910 (*M.C.N.H.*).

SCAUP DUCK (*Nyroca m. marila*).—Mr. E. Cambridge Phillips writes that he shot a female at Rowden about 1858, and another was shot on the Canal near Hungerford on Dec. 6th, 1896 (*M.C.N.H.*).

GOLDENEYE (*Nyroca c. clangula*).—Mr. Ward has one shot at Blackland in Jan., 1885, and Mr. Rawlence tells me of one shot at Britford (no date).

COMMON SCOTER (*Oidemia n. nigra*).—One was killed at Marlborough during the fog on the night of April 2nd, 1911 (*M.C.N.H.* and elsewhere).

GOOSANDER (*Mergus m. merganser*).—Mr. Cambridge Phillips writes that one was shot near Calne about 1858, and the Rev. F. C. R. Jourdain tells me of one shot on the Avon, near Lacock Abbey, on Dec. 24th, 1892.

CORMORANT (*Phalacrocorax c. carbo*).—One was seen at Salisbury in Sept., 1896 (*Field*, Sept. 19th, 1896). Some twenty-five appeared at Marden on Oct. 2nd, 1902 (*Devizes Gazette*, Oct. 7th, 1902), and Mr. Picket, the bird-stuffer, of Salisbury, writes that a "Shag or Cormorant" was shot at Britford in 1902.

GANNET (*Sula bassana*).—A young one was seen five miles from Amesbury on Nov. 16th, 1909 (*Field*, Nov. 27th, 1909). Mr. J. H. Gurney does not mention any Wiltshire specimens in his list of Gannets inland (*The Gannet*), although four cases are given in Smith's book.

STORM-PETREL (*Hydrobates pelagicus*).—One was picked up at Panterwick on Oct. 14th, 1881 (*M.C.N.H.*), one was shot on Rushall Down on Nov. 20th, 1893 (*Devizes Gazette*, Nov. 30th; *Field*, Dec. 2nd, 1893), the *Salisbury Journal* of Nov. 17th, 1894, records one picked up in that city, and

another was picked up at Edington on Dec. 4th, 1909 (*W.A. & N.H.*, XXXVI., p. 487).

LEACH'S FORK-TAILED PETREL (*Oceanodroma leucorhoa*).—One was picked up dead in Grovely Wood on Oct. 10th, 1896 (*Field*, Oct. 17th, 1896).

MANX SHEARWATER (*Puffinus p. puffinus*).—One was picked up on Mere Down on May 6th, 1888 (*Field*, May 19th, 1888); Mr. Ward tells me of one picked up near Calne on Sept. 1st, 1899; Mr. Picket received two males and a female from Bishopstone about 1904; one was picked up at Wootton Bassett on Aug. 29th, 1910 (*Field*, Sept. 13th, 1910), and Mr. McNiven tells me of another on the same date near Alton Barnes.

GREAT-CRESTED GREBE (*Colymbus c. cristatus*).—One was seen on Braden Pond on April 3rd, 1912 (*W.A. & N.H.*, XXXVII., p. 615).

GREAT NORTHERN DIVER (*Gavia immer*).—One was shot by Dr. Blackmore near Salisbury some years ago.

RED-THROATED DIVER (*Gavia stellata*).—One was picked up injured at Wylde in the beginning of Feb., 1909—it is now in the Devises Museum (*W.A. & N.H.*, XXXVI., p. 140).

PALLAS'S SAND-GROUSE (*Syrhaptes paradoxus*).—A covey of about twenty was seen for several days previous to May 20th, 1888 (*Field*, June 2nd, 1888).

OYSTERCATCHER (*Hæmatopus o. ostralegus*).—One was picked up dead on the Downs near Marlborough in 1904 (*M.C.N.H.*).

CREAM-COLOURED COURSER (*Cursorius g. gallicus*).—There is a full account of one which was shot on the Downs above Earlestone on Oct. 10th, 1896, in the *Zoologist* for November, 1896, and in the *W.A. & N.H.*, XXIX, p. 70.

DOTTREL (*Charadrius morinellus*).—Two were shot at Totterdown about 1900; two at Choltern on Sept. 8th, 1905; four were shot out of eight at Codford on Sept. 15th, 1904, and another at the same place on Sept. 8th, 1905. Mr. M. Vaughan hears that it is sometimes seen on the Plain in the second week in May.

RINGED PLOVER (*Charadrius h. hiaticula*).—Two were shot at West Kennet in 1883 (*M.C.N.H.*), and Mr. Ward shot one at Blackland in June, 1889.

RUFF (*Machetes pugnax*).—A reeve was shot at Ramsbury on Dec. 22nd, 1879 (*M.C.N.H.*).

KNOT (*Canutus canutus*).—An injured female was caught in Salisbury on Feb. 27th, 1906 (*Zool.*, April, 1906).

DUNLIN (*Erolia a. alpina*).—One was shot near the river Ray on Jan. 24th, 1907 (*W.A.&N.H.*, XXXV., p. 150).

GREY PHALAROPE (*Phalaropus fulicarius*).—Mr. Cambridge Phillips tells me of one at Burytown Blunsden and another at Holt (no dates). One was shot at the end of Sept., 1889, at Collingbourne Ducis (*M.C.N.H.*). Mr. Ward shot one at Calstone (no date), and in the Devizes Museum are three (one in full summer-plumage, shot near Downton (no date).

[RED-NECKED PHALAROPE (*Phalaropus lobatus*).—One recorded from Marlborough in 1869 (*Birds of Wiltshire*, p. 450) turns out to be a Grey Phalarope (*M.C.N.H.*, 1904).]

WHIMBREL (*Numenius ph. phæopus*).—One was caught wounded on August 20th, 1877, and on May 15th, 1890, five were seen and two shot on the Downs near Kennet (*M.C.N.H.*).

COMMON SNIBE (*Gallinago g. gallinago*).—Two nests were found near Marlborough 1909 (*M.C.N.H.* and *Brit. B.*, III., p. 29), and Mr. Vaughan tells me it almost certainly nested at Milton in 1913.

BLACK TERN (*Hydrochelidon n. nigra*).—Mr. Cambridge Phillips tells me of one at Chippenham in 1858; a pair were seen at Ramsbury Park on May 16th, 1901 (*M.C.N.H.*), and several were seen at Amesbury in Aug., 1911.

GREAT BLACK-BACKED GULL (*Larus marinus*).—I saw one on the Downs above Alton White Horse on April 23rd, 1910.

KITTIWAKE GULL (*Rissa t. tridactyla*).—One was found dead in Savernake on Feb. 5th, 1890, and a young one was shot on the Canal Reservoir near Wolfall on July 17th, 1890 (*M.C.N.H.*).

COMMON GUILLEMOT (*Uria t. troille*).—The Blackmore Museum has a specimen shot at Amesbury in 1888.

LITTLE AUK (*Alle alle*).—"Two, one about 1855" (*M.C.N.H.*). One at Winterbourne during 1912 "wreck" (*Brit. B.*, VI., p. 69), and Mr. Rawlence tells me that one was picked up in Grovely Wood on Dec. 11th, 1912.

PUFFIN (*Fratercula a. arctica*).—Six or seven were seen and one killed by wire, on Nov. 20th, 1893, after a three-days' gale from the north, at Codford St. Mary (*W.A.&N.H.*, XXXVII., p. 185).

GREAT BUSTARD (*Otis t. tarda*).—A female was shot on Feb. 4th, 1891, near Chippenham (*Field*, Feb. 28th, 1891).

LITTLE BUSTARD (*Otis tetrax*).—One was put up on Sept. 27th, 1897, between Roche Court and Over Wallop on Salisbury Plain (*Salisbury Journal*, Oct. 16th, 1897), and "one was moved a fortnight since on Salisbury Plain, near Market Lavington" (*Field*, Nov. 6th, 1897)—presumably the same bird. Mr. James Flower, of Chilmark, has one killed there about 1905 or 1906, and a male in summer-plumage was shot at Avebury on April 26th, 1909 (*W.A.&N.H.*, XXXVI., p. 143).

SPOTTED CRAKE (*Porzana porzana*).—Mr. Ward has one killed by telegraph wires at Cherhill in May, 1887, one was killed in Marlborough on April 1st, 1890, and another on Aug. 2nd, 1896, in a similar manner (*M.C.N.H.*).

BLACK GROUSE (*Lyrurus t. tetrax*).—A Greyhen was killed against wire near Warminster on April 8th, 1906 (*Field*, April 14th, 1906). The *Hand-List of British Birds* says "some . . . Wilts," but on what authority I know not.*

QUAIL (*Coturnix c. coturnix*).—Many 1893 (*Field*, Sept. 30th, Oct. 7th, and Nov. 18th, 1893). Nest with ten eggs at Aldbourne in June, 1907 (*W.A. & N.H.*, XXXV., p. 318), eight in Sept. and Oct., 1909 (*Bull. B.O.C.*). Some reported in autumn, 1913.

The members of the Marlborough College Natural History Society are doing excellent work in their neighbourhood, but it is a pity that rather more discrimination is not used in inserting records in the report. I also wish that the compilers of the report would enter dates in the usual manner: their present system of using a number for each day of the year (e.g. June 8th is entered as 159) is most objectionable, and makes a mental calculation necessary before comparison with other sources is possible.

* See Saunders, *Manual*, 2nd ed., p. 493; we had no later information.—EDS.

THE LATE G. E. H. BARRETT-HAMILTON.

GERALD EDWIN HAMILTON BARRETT-HAMILTON, born 1871, B.A. Cambridge 1894 (first-class in the Natural Science Tripos in the same list with his friend Dr. E. A. Wilson), Major 5th (Militia) Battalion Royal Irish Rifles, in which he served during the South African war, Hon. Captain in the Army, F.Z.S., M.R.I.A., though principally known as a mammalogist, was also an ornithologist, but as the bulk of his contributions to ornithology appeared in the pages of the *Irish Naturalist*, he was probably not so well known to English ornithologists as he deserved to be. Without attempting a complete list, there are communications on birds from him in the *Ibis* for 1895-97-98, 1900-02, and *Bull. B.O.C.*, 1898 (LI. and LIII.), etc. His most enduring memorial will be *A History of British Mammals*, appearing in parts, of which, unfortunately, not much more than half is yet published.

In October last, accompanied by an assistant from the Natural History Museum, South Kensington, he started to South Georgia (the captain of the ship being an old Norwegian whaling friend of the writer's of nearly thirty years ago) on a mission from the Colonial Office, to investigate and report on the whaling, sealing, and "penguinizing" carried on there, and also to investigate and report on, and to form a collection of, the fauna of the island for the Natural History Museum. After a passage of thirty-five days he landed there, and found himself surrounded by several most interesting species of birds and beasts. The weather he described to the present writer as bright and sunny, alternating with snow-storms. Each morning that a whale was in he was down at the slip by 6 a.m., and he was hoping to leave on his long passage homewards towards the end of February, but on January 17th he died, apparently almost suddenly, from heart failure. It took a whaler a week to reach the Falkland Islands, whence a cablegram, lacking as usual all details, took another week to arrive at the Colonial Office. His body is being brought home in the whaler "Orwell," due at Liverpool about February 27th, and will be taken on thence to his home in co. Wexford, where his widow and six little children sadly await it.

The necessity for the punctual publication of BRITISH BIRDS is the reason for the brevity of this utterly inadequate notice of a friend who deserved the very best that could have been written.

ALFRED HENEAGE COCKS.

NOTES

PINE-GROSBEAKS IN SUSSEX.

ON January 21st, 1914, I was shown a couple of very fine Pine-Grosbeaks (*Pinicola e. enucleator*) that had been obtained the previous day at Brightling, Sussex. They were both males, and one was of a beautiful rosy colour and of a far more gaudy tint than the other.

H. W. FORD-LINDSAY.

TWO-BARRED CROSSBILLS IN SUSSEX.

ON January 15th, 1914, a pair of Two-barred Crossbills (*Loxia l. bifasciata*) were obtained at Netherfield, Sussex. When seen they were in company with a number of Common Crossbills. I saw the birds in the flesh on the following day, when I was informed that at least a couple more were present in the flock, as the white bars were distinctly visible as the birds flew away.

H. W. FORD-LINDSAY.

INCURSION OF WAXWINGS.

THE following notes of occurrences of Waxwings are additional to those published in our last number (*supra*, pp. 263-64), and we shall still be glad to have particulars of any not included in these or the previous notes, so as to make the record as complete as possible.

SCOTLAND.

The Editors of the *Scottish Naturalist* write (1914, p. 26): "We have records . . . from Pomona, in Orkney, from the Island of Lewis (Stornoway), and from the Scottish mainland from the extreme north to the Solway on the west and the Tweed on the east. Usually single individuals are notified, but a few small parties have been seen. The dates range from early November, but most of the birds have come under notice since the new year set in."

MORAYSHIRE.—"I saw four or five at the end of December in Morayshire. They had been there for some days previous and remained at least another week. They were very tame, allowing an examination within two or three yards, and were feeding on rose hips" (J. Davidson).

ARGYLLSHIRE.—"I saw a Waxwing on December 13th and again in the same place on December 15th, in a wood

near Tayvallich. It was not wild and allowed a close inspection" (G. Brooksbank).

WIGTOWNSHIRE.—One near Whauphill on January 23rd (J. G. Gordon).

ENGLAND.

NORTHUMBERLAND.—Mr. J. M. Charlton informs us of the following: two shot from small party, December 9th, at Smeafeld (H. B. Hodgson); party of four in a garden at Cullercoats on December 29th and 30th, very restless, feeding on berries; raised and lowered crests and spread tails (Mrs. R. Leeson). Four observed at Longframlington on January 6th (John R. Robinson); six at Fulbeck, Morpeth, on January 6th and 7th; two seen at Ebchester on January 8th (*Newcastle Journal*); a party observed at Ponteland on January 9th; two shot at Chopwell on January 28th (R. Mackenzie); eight seen at Rothill, near Whittingham, on January 26th; reported at Otterburn at the beginning of January. Several flocks seen in the Whittingham and also Longframlington districts, January 28th and February 5th (M. Portal).

CUMBERLAND.—One was shot near Carlisle on January 5th (Capt. S. Pershouse).

YORKSHIRE.—From December 6th to January 3rd a number reported from the Whitby district, the largest flock being composed of twenty-one (T. Stephenson, *Nat.*, 1914, p. 67). In December, one near Filey and another at North Burton (*loc. cit.*, p. 71). Mr. E. W. Wade informs us of the following: one shot at, and another three miles from, Thearne, near Beverley, on November 18th and 21st, and one at Hutton Cranswick on December 8th; one of a pair which had haunted a garden for a month, killed by a cat at Hornsea on December 10th; one shot at Driffild on December 20th; two shot, and a flock of about forty seen near Selby on December 23rd; one shot at Barrow on December 30th; one at Hunmanby on December 23rd; one at Elloughton for about a week from January 7th; two at Ferriby at the end of January.

LINCOLNSHIRE.—One at Brigg early in January (W. Middlemost); one at Hainton about January 29th (F. L. Blathwayt).

DERBYSHIRE.—Four were seen in the garden at Ridge Hall, Chapel-en-le-Frith, on December 20th; two, one of which was much exhausted, were seen on January 12th about two miles from the same place (W. M. Marsden).

LEICESTERSHIRE.—One seen “last week” (G. Ellis, *Field*, 31.I.1914, p. 245).

SHROPSHIRE.—One seen at Shrewsbury on February 9th (H. E. Forrest).

MONMOUTHSHIRE.—One was shot near Magor on January 19th (R. C. Banks).

NORFOLK.—M. J. H. Gurney writes as follows: “The number registered up to date, including some in Lothlingland, which geographically goes with Norfolk, is about sixty-eight. This total may be compared with the return of seventy in 1903 (*Zoologist*, 1904, p. 214), forty in 1893, and one-hundred and fifty in 1866. The migration of 1913-14 has certainly been smaller than that of 1866-67, and that again was smaller than the visitation of 1849-50, at all events in the eastern counties.

“During the present winter the first intimation of their presence was received by Mr. Arthur Patterson on November 15th, 1913. There were few to be heard of at first, but it is evident that small bands kept on arriving, and gradually working their way inland; and there being more observers than formerly, they were quickly noticed, but in most cases not shot at. This is just what happened in 1866, when the first was noticed on November 17th, but they were more persecuted then. On January 28th Mr. B. B. Riviere and I, having been informed that there was a flock in a street (Havelock Road) on the outskirts of Norwich, went in search, and soon found four of them feeding upon the red haws of a large whitethorn, one of the very few thorn trees still retaining any berries. The haws were dexterously pulled off one by one and swallowed whole, except what were dropped. Indeed, their habits were very wasteful, for although one Waxwing might gulp down three or four running, the next would drop twice that number on the ground, so that the heavy crop upon the tree diminished with needless rapidity. After a few minutes had been devoted to a meal these Waxwings seemed satiated and flew across the street to a large tree opposite where they remained for a time quiescent, unconcernedly preening themselves, and we noticed that they never depressed their crests. They soon grew hungry again, which perhaps accounted for their tameness, albeit voracity is characteristic of the Waxwing, as was remarked by Willughby in the seventeenth century. They were also thirsty, for we saw two of them go to an adjacent house-top and drink out of the gutter. I heard them utter no sound, and have

remarked the same absence of note in confinement, which makes the name of 'Chatterer' rather inappropriate. After a few days they found their way still further into Norwich, and when last seen were perched on thorn trees adjoining a coach-builder's at St. Giles's Gates, but the original number, which was said to have been six, was reduced to three, so I fear the others had been starved. Owing to the wild hawthorn, privet, and elder berries being all over, several of the Waxwings were discovered in gardens, where no doubt there was more chance of finding food. In Surrey Street, Norwich, one actually came down the chimney of a drawing room.

"At Sheringham I learn from Mr. Patterson of a little flock, which at one time numbered as many as ten, being for some time in a private shrubbery, where they were seen to slake their thirst at an artificial pond; and in another case a bird was watched with great interest from a drawing-room window at Fritton.

"Specimens dissected by Mr. E. T. Roberts had been feeding upon elder berries, bullaces (?), and hawthorn berries, to which Mr. Gunn adds ivy and the wild rose, but holly berries Waxwings apparently have a distaste for. It may be wondered where they got bullaces at this time of the year, but Mr. Roberts tells me a pair were shot on a bullace-plum tree, and each contained a small plum stone."

Two seen, one shot, at Burnham Market early in January; one shot at Hanworth on February 8th (G. B. Hony).

SUFFOLK.—A flock of five or six near Beccles on December 22nd; a flock of five or six frequented a garden in Lowestoft from December 17th to 24th; three at Oulton Broad on January 3rd, and one on January 7th; one near Lowestoft on January 15th; one near Aldeburgh about January 21st (C. B. Ticehurst). Two at Rougham on December 25th (Rev. J. G. Tuck, *Zool.*, 1914, p. 75).

CAMBRIDGESHIRE.—Waxwings were seen in a garden on the outskirts of Cambridge from January 22nd to 25th; on the 23rd one was watched for about half-an-hour in a small birch tree; five or six were seen on January 25th, and they appeared to have been feeding on rose hips (W. Farren).

KENT.—One at Crouch on January 30th; two seen by Mr. Elgar of Maidstone Museum in that town feeding on hawthorn berries on January 26th, and to the present date

(February 5th); four were shot in the Ashford district about January 10th, and one about the same date at Sutton Valence (Rev. J. R. Hale). Seven seen between January 11th and 20th at Dover (G. Mannering). Female shot, Smarden, January 2nd (R. Cheesman). Female shot, Westerham, January 29th; two females shot Newenden, January 30th (N.F.T.). Male shot, Cranbrook, January 30th (R. Cheesman).

SUSSEX.—Male shot, St. Leonards-on-Sea, February 7th (N.F.T.).

SURREY.—One at Roehampton on January 25th, feeding on holly-berries (*Field*, 14.II.1914, p. 355).

IRELAND.

LONDONDERRY.—One was shot at Aghadowey on January 1st (W. C. Wright).

TYRONE.—One was shot at Stuart Hall on December 25th, this being the first record for the county (N. H. Foster, *Irish Nat.*, 1914, p. 51).

DOWN.—One was shot at Ardglass on January 27th (W. C. Wright).

FERMANAGH.—“On January 10th I received a Waxwing shot on west shore of Lough Erne, co. Fermanagh; it was probably killed about January 6th” (R. M. Barrington).

ABROAD.

In the *Revue Française d'Ornithologie* (No. 58, pp. 241-43) Waxwings are recorded from the following departments: Pas-de-Calais, Calvados, Seine-et-Oise, Loiret, Côte-d'Or, Haute-Saone, Jura; also in Savoie, Switzerland, and Provence. Most seem to have occurred at the end of December, but they appeared in Switzerland at the end of November. *Le Gerfaut* (Jan. 1914, p. 16) gives eight occurrences from the Ardennes and three at Auvclais, November 11th being the earliest date. Prof. Mathey-Dupraz of Colombier, Switzerland, records in the *Ornithologische Beobachter*, XI., p. 91, a flock of seven on December 12th, and further passages of migratory flocks on December 23rd and at the end of the month.

SIBERIAN CHIFFCHAFF IN KENT.

On November 28th, 1913, near Tunbridge Wells, I saw a bird which I suspected was a Siberian Chiffchaff (*Phylloscopus collybita tristis*). Fortunately the bird remained in the same place until December 17th, and as it was

not at all shy, it provided numerous opportunities for a close and thoroughly satisfactory inspection. I myself watched it on eight different occasions, once or twice for over an hour, and the bird was also seen and identified by Miss E. L. Turner, Mrs. Beecheno of Southborough, who watched it daily for some time, Mr. H. M. Wallis and Mr. J. B. Crosfield. It inhabited the valley of a small stream near the end of a wood—a very sheltered region with plenty of broom and bracken and hawthorn, in which this bird, several Goldcrests, and a Firecrest seemed to find abundance of food. I watched the bird under a variety of conditions—in brilliant sunshine, under gloomy skies, in the middle of the day, late in the afternoon, against the sky, against a very dark broom-bush, and hopping by the stream. Under all these conditions the white of the under-parts was so marked as to leave not the smallest doubt in the minds of any of those who saw it, that the bird could only be *Ph. c. tristis*. In addition to this, I was able on several occasions to note its very dark legs, though I doubt whether I ever saw it resting for a second. The plumage of the upper-parts showed no trace of green, and the only yellow visible was the lemon-yellow edge of the wing.

Sometimes the bird was practically silent, but at other times it frequently uttered a very plaintive call-note, sometimes fairly loud, which appeared to be most like the shrill call of a Hedge-Sparrow or the single note of a Coal-Tit, and quite distinct from that of *Ph. c. collybita*. This precisely agrees with the description of the note quoted by Mr. Dresser from Mr. W. E. Brooks, who observed this bird in India in winter. I had not discovered this account of the winter-note when I mentioned this bird at the meeting of the British Ornithologists' Club on December 10th: at that time I had only read the accounts of those who have observed the bird in the breeding-season, when its notes appear to be different from in winter. This seems to me a most convincing proof of the bird's identity. Even apart from the note, the colour of *Ph. c. tristis*, as may be seen from the series in the Natural History Museum, is so different in every case from that of *Ph. c. collybita* and *Ph. c. abietinus*, that there cannot, in Miss Turner's opinion and my own, be any possibility of confusion. And since we sometimes watched this bird within two yards, I hardly see that any doubt can exist.

It is perhaps well to add that I have observed the common Chiffchaff (*Ph. c. collybita*) in winter: three years ago I

saw one in December and January near Tunbridge Wells which, as I recorded at the time in *BRITISH BIRDS* (IV., p. 310), was evidently not *Ph. c. tristis*. In the south of France I have observed this bird not only as a resident but also as a common winter-visitor; these winter-visitors made the ordinary note of *Ph. c. collybita*—the single note which is exactly similar to that of the Willow-Wren (*Ph. t. trochilus*).

It would, no doubt, have been easy to obtain the bird if this had appeared desirable: an attempt to catch it was being arranged at the time when the bird left the district, though I am not aware of any characteristic by which it could have been more satisfactorily identified in the hand than on the wing; but those of us who were watching the bird agreed that it was of much greater interest to see how long it would remain in the same place than to preserve its skin; particularly, it was remarkable that the bird should be in the same place as the Firecrest, one or two of which appear to be almost annual visitors to that spot (*antea*, p. 82) in autumn or spring; I am not aware, however, that the breeding-range of *Ph. c. tristis* anywhere overlaps that of *R. i. ignicapillus*, so it may be doubted whether the two birds came together. Still, there seems quite a chance that the rarer bird may also re-visit the place, and if it should do so, the record would, of course, be of exceptional interest. Even now it seems to me far more interesting to know that a bird of this race definitely took up its abode for several weeks in a locality in west Kent, many miles from the sea, than to have known that it occurred there one day and was shot the next. Now that it is recognized that the occurrence of so-called stragglers is far more regular than was at first supposed, it seems well worth while to let some of these rare birds live, in the hope of discovering their winter-resorts. This, however, will only be done when ornithologists are prepared to give credence to records of birds, however rare, when there is no room for doubt that the birds in question were properly identified by competent observers. H. G. ALEXANDER.

KITE NESTING IN DEVONSHIRE.

WE are pleased to record that a pair of Kites (*Milvus milvus*) nested in Devonshire in the spring of 1913. Unfortunately the nest was taken by some boys, to the great annoyance of the owner of the estate, who for many years has taken a great pride in the Buzzards, which have increased in numbers under his protection.

There is no previous record of Kites breeding in the county for many years, and it has only been known as a rare visitor at long intervals.

JAMES R. HALE.

CLIFFORD BORRER.

KITES IN SOMERSETSHIRE, DERBYSHIRE, AND BUCKINGHAMSHIRE.

A KITE was seen by me and another, a very competent observer, on five occasions between December 20th and 30th, 1913, in north Somersetshire. A. F. R. WOLLASTON.

ABOUT the end of April, 1913, Mr. D. Palmer Pearson noticed a very large bird of prey, which quite dwarfed the Kestrels which nest there regularly, haunting the face of the High Tor at Matlock. He remarked its size, reddish colour, gliding flight and deeply-forked tail, which was deflected from side to side as it sailed to and fro. From this time it was seen by him on various occasions, among other dates on May 16th and 19th, and on one occasion it settled on a tree for some time, while on June 17th Mr. Pearson wrote that he had seen it again that evening. At least four other observers in the Matlock district saw the bird, and agreed in their description of its appearance and there can be no doubt that it was an example of the Kite (*Milvus milvus*). Miss Fitzherbert also noticed a large hawk with a forked tail at Somersal Herbert, about the end of June, which may have been the same bird. Messrs. R. Hall and W. N. Statham, who kindly supplied me with information respecting this bird, agreed not to publish any note of its appearance for some time in order to give it every chance, and as far as we are aware it has not been shot; but it appears to have been unable to find a mate.

F. C. R. JOURDAIN.

MR. GUY C. ROBSON informed me on December 20th that he had, on December 15th, 1913, between Wendover and Halton, twice seen a bird which he felt sure was a Kite, and I satisfied myself, by independent inquiries, that he was correct in his identification.

WALTER ROTHSCHILD.

[The above records are most interesting in view of the fact that the Kites in Wales have shown a welcome increase in the last few years. It seems to us much more likely that the birds above recorded came from Wales than from the Continent. No doubt stragglers occasionally reach us from abroad, but since the Kite has become so rare in the British Islands as a breeding bird, very few indeed have

been recorded outside the breeding-area, and so far as we know none for the last ten or twelve years. The record of nesting in Devonshire is the best evidence for suggesting that the Kite is spreading from its breeding-quarters in Wales, and Mr. Wollaston's Somersetshire bird may possibly have been one of the Devonshire pair. We have also reason to believe that the latter are not the only ones which have attempted to breed in England of late years. The Derbyshire bird was much more likely to have come from Wales than from the Continent, while the one which appeared in Buckinghamshire in December probably had the same origin, since the Kites which breed in the northern part of the Continent would long since have completed their usual southward migration.—Eds.]

PINTAILS IN BERKSHIRE.

ON January 18th, 1914, we saw two adult male Pintails (*Dafla acuta*) on Englefield Lake, Berkshire. We believe this to be the first definite record of this species in Berkshire.

R. BURNIER.

P. A. CHUBB.

[Mr. Heatley Noble recorded what he believed to be the first definite occurrence in 1907 (*antea*, Vol. I., p. 292).—Eds.]

RED-BREASTED MERGANSERS IN SURREY.

ON December 28th, 1913, my brother and I saw two Red-breasted Mergansers (*Mergus serrator*) on Little Frensham Pond, Surrey. They were among some Teal, Mallards, Pochards, and Tufted Ducks. I did not revisit the pond until January 2nd, when the Mergansers were gone.

FLORA RUSSELL.

BLACK-HEADED GULL FEIGNING LAMENESS.

WHILST on a visit to the gullery at the south end of Walney (Lancashire) on May 22nd, 1909, I was much surprised and greatly interested in the behaviour of one particular Black-headed Gull (*Larus ridibundus*) which, on our approaching the vicinity of (I suppose) its nest, alighted on the ground and stumbled along before us, feigning lameness much in the same manner as the Ringed Plover does.

Seating myself along with my companion on one of the sand-hills, in order to watch the gulls settle on their nests, we had ample opportunity of noting the bird in question, and for a long time it carried out the same movements—

flying towards us, alighting and stumbling away with drooped wing, sometimes varying the direction by travelling across our front instead of away from us.

The bird was not lame or hurt, as it could walk perfectly well when not feigning lameness. Although I have visited this gullery many times, I have never before or since seen this peculiar habit.

H. B. TURNEY.

ARCTIC SKUA IN SHROPSHIRE.

ON October 6th, 1913, an example of *Stercorarius parasiticus* was found dead at Broad Oak, four miles north of Shrewsbury. It appeared to be an immature bird of the dark form, the under-parts being dusky with some white mottlings. This Skua has been recorded several times previously in Shropshire, always in rough weather.

H. E. FORREST.

"HAIRY" VARIETY OF THE MOORHEN.

AN example of the so-called "hairy" variety of the Moorhen (*Gallinula ch. chloropus*) was shot by Sir Henry Wiggin at Walton Hall, Eccleshall, Staffordshire, on January 10th, 1914, and sent to Mr. Spicer, taxidermist, Birmingham, for preservation. In my opinion, the peculiar "hairy" plumage is due to a disease, or partial atrophy, of the feathers. Reference may be made to the *Zoologist*, 1901, p. 108, in which particulars of other local examples are given.

H. E. FORREST.

SLENDER-BILLED NUTCRACKER IN SURREY.

I HAVE recently had an opportunity of examining a Nutcracker which was shot on October 13th, 1913, in Addington Park (near Croydon), Surrey; it is the Slender-billed form, *Nucifraga caryocutactes macrorhynchus*. I saw it both in the flesh and in skin.

T. A. COWARD.

NORTHERN BULLFINCH IN ORKNEY.—Mr. W. Eagle Clarke records (*Scot. Nat.*, 1914, p. 15) that he saw in the museum at Stromness an example of *Pyrrhula p. pyrrhula* captured in the neighbourhood in October 1912. Mr. E. W. Powys reports (*Field*, 6.XII.13, p. 1202) that a pair of Bullfinches (probably of this form) were in a plantation on Eday for several days at the end of November, 1913.

CROSSBILL NESTING IN SUFFOLK IN JANUARY. — In the *Field* (17.I.14, p. 139) the Editor states that he has inspected a young Crossbill (*Loxia c. curvirostra*) which was picked up in a plantation at Mildenhall by a keeper, who saw the old birds feeding it and the rest of the brood which were

still in the nest. In the issue for the following week (p. 191) Mr. P. F. Bunyard relates that he has heard from the keeper in question, who states that he picked up the bird on January 6th. Mr. H. Noble recorded (*antea*, Vol. III., p. 302) young birds nearly fledged in Norfolk on January 12th, 1910.

RICHARD'S PIPIT IN MIDLOTHIAN.—An example of *Anthus r. richardi* is reported (*Scot. Nat.*, 1914, p. 19) by Mr. M. R. Tomlinson to have been picked up (injured apparently by telephone wires) on December 6th, 1913, at Musselburgh.

SUPPOSED YELLOW-BROWED WARBLER IN KIRKCUDBRIGHTSHIRE.—Mr. J. Bartholomew reports (*Scot. Nat.*, 1914, p. 20) that on October 15th, 1913, he saw, near Blackmark Burn, a bird of the size of a Goldcrest with a "most distinct light-coloured stripe over its eyes." This, he feels certain by examination of specimens, was an example of *Phylloscopus superciliosus*, but without further details we think the identification must remain doubtful.

CUCKOO'S EGGS IN NESTS OF HOUSE-SPARROW.—With reference to Mr. Massey's note on this subject (*supra*, p. 264), Mr. F. W. Peaples informs us that the two Cuckoo's eggs found by him in Sparrows' nests in 1908 and 1909 were precisely similar in type, and were, Mr. Peaples considers, the product of a bird which had frequented the locality for several seasons and usually laid in nests of Meadow-Pipits. The latter species was sparsely distributed in the district in 1908 and 1909.

SPARROW-HAWK AND MISTLE-THRUSH AT BARRA.—The Duchess of Bedford reports (*Scot. Nat.*, 1914, p. 21) having seen a single *Accipiter nisus* on November 8th, 1913, at Barra. This appears to be the first authentic instance of the bird's occurrence in the Outer Hebrides. On November 14th her Grace saw a specimen of *Turdus viscivorus* which remained for several days. This bird has bred for the last ten years or so at Stornoway, but was formerly unknown in the Outer Hebrides.

CORMORANT'S MODE OF PROGRESSION UNDER WATER.—A lengthy discussion has been proceeding in the *Field* (November 1913 to January 1914) as to whether the Cormorant uses its wings under water. Good evidence is brought forward by several writers that the bird sometimes (especially when it is turning sharply or is closely pursued) makes use of its half-opened wings.

LITTLE BUSTARD IN SUSSEX.—Mr. H. Wells records (*Field*, 17.I.14, p. 139) that he has received for preservation a specimen of *Otis tetrax*, shot at Goring-by-Sea, on January 12th, 1914.

RARE MIGRANTS AT AUSKERRY, ORKNEY.—Mr. W. Eagle Clarke's discovery of the Dusky Warbler at Auskerry, one of the most easterly of the Orkney Islands, has already been referred to (*supra*, pp. 220-3). Mr. Clarke now (*Scot. Nat.*, 1914, pp. 5-8) gives a remarkable list of other rare and interesting migrants noted on the island in the autumn of 1913. Of these the following are the most interesting :—

SCARLET GROSBEAK (*Carpodacus e. erythrinus*).—No less than nine are recorded, two Aug. 31st, one Sept. 4th, one 6th, two 14th, one 15th, one 29th and one 30th.

LITTLE BUNTING (*Emberiza pusilla*).—A female on Sept. 21st.

SHORT-TOED LARK (*Calandrella b. brachydactyla*).—A male on Oct. 1st.

RED-THROATED PIPIT (*Anthus cervinus*).—A young male on Oct. 1st.

TREE-PIPIT (*A. t. trivialis*).—Quite abundant on passage between Sept. 15th to 22nd. Only once or twice previously recorded in the Orkneys as a vagrant.

PIED WAGTAIL (*Motacilla a. lugubris*).—Single birds on Sept. 19th and Oct. 3rd, and three on Oct. 6th.

RED-BREASTED FLYCATCHER (*Muscicapa p. parva*).—A young male on Sept. 21st and 22nd.

SCANDINAVIAN CHIFFCHAFF (*Phylloscopus c. abietinus*).—Chiffchaffs obtained between Sept. 14th and Oct. 6th belonged to this form.

WOOD-WARBLER (*Ph. s. sibilatrix*).—One on Sept. 30th.

YELLOW-BROWED WARBLER (*Ph. s. superciliosus*).—One on Sept. 29th.

BARRED WARBLER (*Sylvia n. nisoria*).—An adult on Sept. 6th.

LESSER WHITETHROAT (*S. c. curruca*).—Single birds on Sept. 4th, 24th, and 28th.

WHINCHAT (*Saxicola r. rubetra*).—Two on Sept. 15th, one 16th and one 30th.

BLACK REDSTART (*Phœnicurus o. gibraltariensis*).—Single birds on Sept. 29th and 30th and Oct. 5th.

RED-SPOTTED BLUETHROAT (*Luscinia svecica*).—One on Sept. 5th.

CONTINENTAL HEDGE-SPARROW (*Prunella m. modularis*).—One on Oct. 1st.

SPARROW-HAWK (*Accipiter n. nisus*).—Two on Sept. 24th. Mr. Clarke says that there is no previous reliable passage-record of the Sparrow-Hawk in any of the northern islands of Scotland.

STOCK-DOVE (*Columba ænas*).—One on Oct. 4th, Mr. Clarke says, is the first really satisfactory record of its occurrence in Orkney.

BLACK TERN (*Hydrochelidon n. nigra*).—One on Oct. 1st is the first record for the northern islands of Scotland.

LETTERS.

FLEAS AND BEETLES IN OLD NESTS OF BIRDS.

To the Editors of BRITISH BIRDS.

SIRS,—With reference to Mr. Masefield's note (*antea*, p. 270), fleas may generally be found in Tit's nests in the winter, and during the first few warm days in spring may be seen waiting in numbers outside the hole ready to jump on to anything moving near. If a Tit's nest be examined when the full clutch of eggs has just been laid, a large number of a small beetle (*Microglossa pulla* Gyll.) may generally be found in it: the larva of this beetle probably feeds on the larva of the flea. Another member of the same genus (*M. nidicola* Fairm.) is confined to, and may nearly always be found in the nests of the Sand-Martin; this bird, like several others, has a flea peculiar to it. The beetle larva seen by Mr. Masefield was probably of *Choleva fumata* Spence, a beetle found commonly in almost any kind of nest, and in other situations. For further information on the subject of the insect-inhabitants of old birds' nests, see a note of mine in the *Entomologists' Monthly Magazine*, Vol. XVI., p. 239.

NORMAN H. JOY.

BRADFIELD, BERKS, *February, 1914.*

BAER'S POCHARD IN NOTTINGHAMSHIRE.

To the Editors of BRITISH BIRDS.

SIRS,—As the information *re* Baer's Pochards which you have quoted from my letter, though accurate, is put in such a way as to be rather misleading, may I ask you to publish this letter?

When you asked me whether the duck shot in 1911 could have come from Woburn, I informed you that two pinioned birds had lived on one of our ponds for many years. These birds disappeared one after the other about four years ago, and we presumed they had died. During the years they lived here they never wandered from their pond and seldom if ever left one end of it. In my letter to you I stated that these were the only Baer's Ducks we had imported, but I ascertained shortly afterwards from my son that he turned down a pair last year (1913), and advised you accordingly.

Rare ducks are not dropped promiscuously upon our ponds by anyone wishing to find a home for them, and unless imported by the Duke of Bedford or Lord Tavistock, we assume that we do not possess them. It seems to me therefore, that it is impossible that the unpinioned bird shot on the Trent in 1911 can have come from here.

M. BEDFORD.

WOBBURN ABBEY, BEDFORDSHIRE, *February 17th, 1914.*



LESSER BLACK-BACKED GULLS.

Drawn by Mr. E. Alexander (From "Life of Ewen Kennedy")

KEY TO PLATE 18.

Nestling
(July 30),
(July 16)

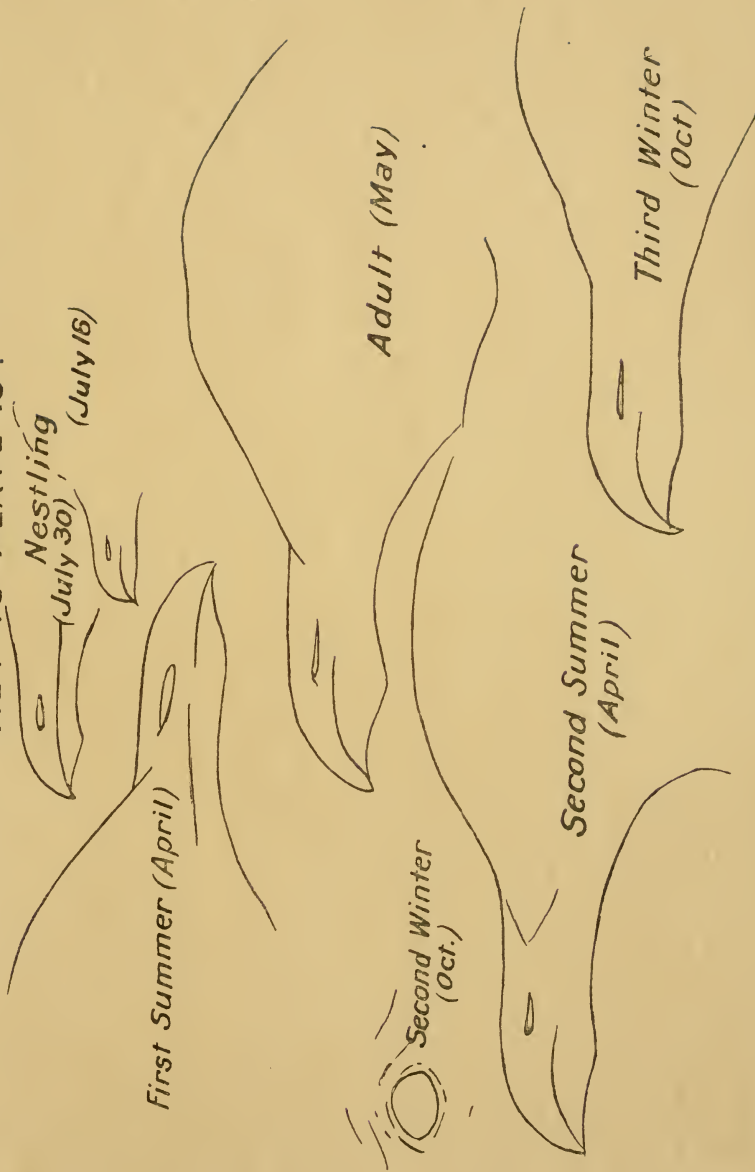
First Summer (April)

Adult (May)

Second Winter
(Oct.)

Second Summer
(April)

Third Winter
(Oct)



FIRST WINTER (Feb.)

THIRD WINTER (Oct.)

THIRD SUMMER (April)



GREAT BLACK-BACKED GULLS.

Drawn by Mr. E. Alexander (From "Life of Ewen Kennedy.")

BRITISH BIRDS

EDITED BY H. F. WITHERBY, F.Z.S., M.B.O.U.

ASSISTED BY

REV. F. C. R. JOURDAIN, M.A., M.B.O.U., AND NORMAN F.
TICEHURST, M.A., F.R.C.S., M.B.O.U.

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A STUDENT OF GULLS.

(PLATES 18 AND 19.)

THAT Ornithology sustained a heavy potential loss by the death of Ewen Kennedy, in 1909, at the early age of twenty-eight, is evident by a perusal of his notes, put together in beautiful form* by the loving hand of his sister, Mrs. Macdonald.

Beyond a charming "foreword," Mrs. Macdonald lets her brother reveal himself—his enthusiasm and perseverance—by his own notes, diaries, and letters. Ewen Kennedy was a born naturalist, and the diaries and letters of his schoolboy days are truly delightful reading, especially those from Loretto, where he collects every sort of Natural History object and spends his pocket-money on cases to keep them in and magazines and books from which to learn about them. Really splendid schoolboy adventures are a raid at night with another boy to a lake where a Canada Goose was robbed of her eggs ("worth 30s. each"!), and similar daring night-expeditions with other adventurous souls to the Bass Rock and back again without its being found out! After school he enters his father's firm, spending all his spare time on Natural History and photography, and making holiday trips to Sutherland, Shetland, and elsewhere. Subsequently he takes to farming, and about this period commences to study British Gulls as a speciality. Unfortunately this investigation, which was carried on for some years in a very thorough way, was brought to an end by his taking up a post in a nitrate company in Chili, where he subsequently died of typhoid.

The second part of this book, containing Kennedy's notes on the moults and plumages of the Herring, Great

* *Life and Natural History Notes of Ewen Kennedy*, edited by his sister May. Edinburgh: Privately printed at the Ballantyne Press, 1913. 12 x 8½. Edition limited to seventy-five numbered copies. Photogravure portrait, ten coloured, and many black-and-white plates. Pp. i.-xv., 1-211.

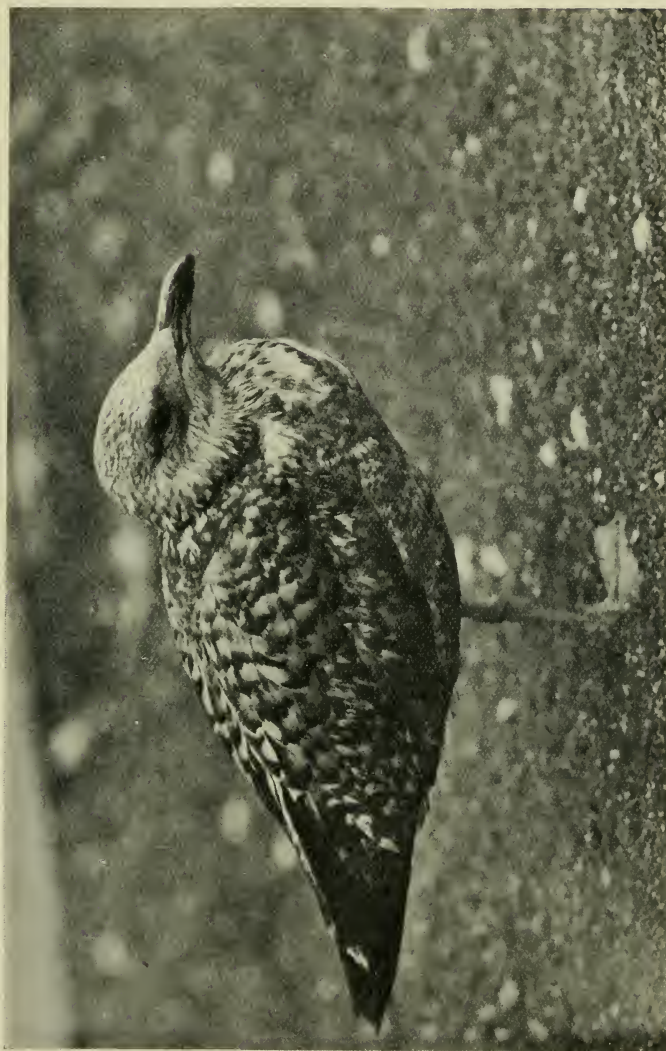
and Lesser Black-backed Gulls, is of very considerable value. Unfortunately the notes are incomplete, and, although most carefully arranged by his friend Mr. H. Colam, were never intended for publication in their present form, and are often difficult to understand. Nevertheless they contain much interesting information, and are illustrated with numerous photographs of the birds in various stages, and with the most beautiful coloured drawings, by Mr. Edwin Alexander, of bills and eyes that we have ever seen. By the kindness of Mrs. Macdonald, we are permitted to reproduce here two of these exquisite drawings, showing the changes in the colour of the bills and eyes of the Lesser and Great Black-backed Gulls at various ages (see Plates 18 and 19). We are also permitted to reproduce a small series of photographs illustrating part of the sequence of plumages of the Lesser Black-backed Gull.

These drawings and photographs were taken from specimens which Kennedy kept in captivity, and most of his notes are based on these captive birds; but they are controlled to some extent by observations on wild birds, and no doubt, had the author lived to complete his task, he would have checked each stage by the examination of wild specimens.

From these notes and photographs it would appear that these Gulls only partially moult their body-plumage in the first autumn, often retaining much of the juvenile-plumage until the spring, and this seems to be confirmed by our own observations of wild birds. The first spring-moult, beginning often in January, is fairly complete so far as the body-plumage is concerned. In May, when the bird is nearly one year old, the first complete autumn-moult commences by the gradual shedding of the primaries in pairs (from the inner to the outer); subsequently the body-plumage is involved, and the moult is not complete until September or October. The moults in subsequent years appear to follow the above as to time and extent. It is curious that Gulls



LESSER BLACK-BACKED GULL. JUVENILE-PLUMAGE: NOT QUITE COMPLETE.



LESSER BLACK-BACKED GULL, FIRST SUMMER-PLUMAGE.



LESSER BLACK-BACKED GULL. SECOND SUMMER-PLUMAGE.



LESSER BLACK-BACKED GULL. THIRD WINTER-PLUMAGE.

(and other birds, as for instance Rooks) should begin to moult their primaries just when they have the extra labour of procuring food for their young as well as for themselves, but that this is so we can confirm by personal observation, in any case as to the Lesser Black-backed Gull.

Exactly when these three Gulls attain the mature plumage, unfortunately remains uncertain from Kennedy's notes. Of one Lesser Black-backed Gull he states that, in third winter-plumage it was adult save for the colouring of the soft parts, but other specimens in third winter show a considerable amount of immature-plumage.

In the case of the Great Black-backed Gull, it is evident from the photograph that a bird in its third winter-plumage is still not quite mature, the tail-feathers being slightly mottled. It is probable, therefore, that these Gulls do not usually attain the complete adult-plumage until the fourth winter.

An interesting point is, that the scutellæ of the tarsus are shed (this is illustrated in one of the coloured plates), and that the bill "flakes" apparently during both the spring- and autumn-moult in immature birds, though whether this is so also in mature birds remains to be shown.

In conclusion, we have to thank Mrs. Macdonald for giving us the opportunity of drawing the attention of ornithologists to her brother's work, which, though necessarily incomplete, is nevertheless most interesting and valuable.

H.F.W.

MANX ORNITHOLOGICAL NOTES: 1912-13.

BY

P. G. RALFE.

THE following notes continue the Manx record from the end of the period covered by the article in *BRITISH BIRDS*, Vol. V., pp. 300-4, to the end of the year 1913.

There is still, probably, a lack of information about some of our smaller species, but the Yellow Wagtail may definitely be added to the list.

ROOK (*Corvus f. frugilegus*).—Mr. F. S. Graves noted young Rooks still in nests at Tholt-e-Will, Sulby Glen, on June 7th, 1913.

CHOUGH (*Pyrrhocorax pyrrhocorax*).—In 1913 the site in a western cave, first noted in 1877 and used in various succeeding years, was again occupied by a nest. The site in an old mine-working (*B.B.*, V., p. 301) was resorted to both in 1912 and 1913, a brood being reared on each occasion. In 1913 I was shown a new site on the same coast, high up in a long, deep fissure, opening obliquely from the sea and filled with luxuriant ferns.

YELLOW WAGTAIL (*Motacilla f. rayi*).—It could hardly be doubted that this species occurred at least on migration, but I long had a difficulty in establishing a record. As far back as 1906 I saw an egg, taken from a nest in a damp and low-lying situation at Baldwin, which appeared to belong to this bird. Several credible observers on the north of the island insisted on having seen both bird and nest. In the last days of August, 1913, I met with a party of a dozen or more at Scarlett; some of these were richly-coloured adult males.

GREY WAGTAIL (*Motacilla b. boarula*).—Mr. F. S. Graves now notes the Grey Wagtail on the Neb, on the stream at Ingebreck, and indeed on all likely waters of the island, at breeding-time. At Spooyt Vane young were just leaving the nest on May 26th, 1913.

WHITE WAGTAIL (*Motacilla a. alba*).—Migrating parties continue to be seen on the south coast in spring and early summer, and again much more numerous in late summer and early autumn. At the latter season many of the birds naturally are immature, and in many cases I have not been able to discriminate between the species, but think that *M. a. alba* at least largely preponderates. The birds are

common on shingle banks and low rocks, and on the adjoining greenswards. A favourite haunt also is the outer harbour and neighbouring pier at Castletown, and the adjoining stony and weedy foreshore. The season of this autumn-migration extends from July to October, but the birds are most numerous in September.

Our Pied Wagtails, on the contrary, seem to inhabit the neighbourhood of the same brook or farmyard for the whole year.

DIPPER (*Cinclus cinclus* ? subsp.).—Another unfinished nest (of 1912) was shown me last summer by Mr. W. E. Cottier, in the Cluggid Gorge, Sulby Glen. Mr. F. A. Craine says that Dippers nested in 1913 under the bridge over the Glass at "Lewthwaite's Mill" at the entrance to East Baldwin.

COMMON HERON (*Ardea cinerea*).—Mr. F. S. Graves ascertained beyond doubt that in 1912 a pair nested in a tree at Injebreck. At least two young were seen in the nest. In 1913 the birds again frequented the locality, but their breeding-place (if they did breed) was not discovered.

Mrs. Jeffcott, of Castletown, who recently died at a great age, was long ago told by an old man that Herons once bred in trees at the Crofts, in the town of Castletown; at that time no street had yet been formed in that locality.

MANX SHEARWATER (*Puffinus p. puffinus*).—Mr. Graves continues to observe this species, evidently on its feeding-ground, when crossing between Douglas and the Bar light-ship. On August 13th, 1913, when near the Bar, he saw in addition to a number of this species, another Shearwater, much larger and of dark plumage both above and below, flying in the same way as the others, but though near them, not actually associating with them.

PURPLE SANDPIPER (*Erolia m. maritima*).—A small flock still, each winter, frequents the same locality at Scarlett.

REDSHANK (*Tringa totanus*).—Seems yearly to be increasing in numbers, and I constantly notice it in new localities (never in the breeding-season).

BLACK TERN (*Hydrochelidon n. nigra*).—Early in May, 1913, Mr. H. J. Kinley saw on the Smelt Dam, Port St. Mary, a bird which from his very exact description can have been of no other species.

COMMON GULL (*Larus c. canus*).—In the late summer of 1913 a few appeared in Castletown Harbour among numbers

of Black-headed Gulls. Now and again I have met with a few elsewhere, but the species seems curiously scarce on the Manx coast.

GREAT BLACK-BACKED GULL (*Larus marinus*).—Referring to a previous note (V., p. 303) I have now learned, by the kindness of Mr. F. Taylor of Oldham, that the nest of the pair mentioned was found both in 1911 and 1912 by his friend Mr. T. Taylor. In the former year it was on the "stack" referred to, with three young; in the second, on the mainland near with three eggs, among fallen blocks of stone behind a larger rock. The Gulls also frequented the neighbourhood in the season of 1913.

During the winters of 1912 and 1913 parties of at least twenty Great Black-backed Gulls have consorted with Herring-Gulls on the sands at the south side of Ramsey Bay.

COMMON GUILLEMOT (*Uria t. troille*).—In the colonies at the south end of the island there is said to have been a great failure to breed in 1913, and the birds seem to have left at an unusually early date.

LAND-RAIL (*Crex crex*).—On August 10th, 1913, Mr. F. S. Graves saw a nest at Corvalley, three miles from Peel (rather high land) in which were twelve eggs. The bird was still sitting, though the hay had been cut, dried, and cleared. The nest, when noticed by the farmer, was covered with some of the cut hay, which still remained there when Mr. Graves examined it, runs having been formed through it to the nest. At the edge lay a quite fresh pellet, three-quarters of an inch long, mostly of beetle-wings, and the eggs were warm.

QUAIL (*Coturnix c. coturnix*).—Mr. J. B. Keig says that in both 1911 and 1912 a few pairs spent the summer and presumably bred in the north of the island.

On September 29th, 1913, Mr. F. S. Graves flushed one from long dry grass on the west side of Dalby Mountain, about seven hundred feet from the sea.

NOTES

ON THE CROSSING OF THE BILL OF THE CROSSBILL.

It has long been known that, in the Common Crossbill (*Loxia curvirostra*) the mandibles cross indifferently on either side in different individuals. Recently, however, for a special purpose, I desired to ascertain whether or not individuals having the mandibles crossed to the right and to the left, respectively, exist in nature in about equal numbers, and (if not) what proportion of individuals has them crossed to the right and what to the left. Hitherto, this point has not been investigated, so far as I am aware.

Accordingly, at the British Museum (where they have a very extensive series of Crossbills), I examined the contents of ten boxes, selected at random. These contained altogether one hundred and seventy-one specimens, of all sexes, colours, and ages (other than nestlings), coming from all parts of the world to which the bird is indigenous.

The result of my investigation was that there were eighty-four specimens which were dextral, eighty-three which were sinistral, and four which were doubtful. By a "dextral" specimen, I mean one having the upper mandible crossing the lower to the bird's right side (that is, to the left side of an observer facing the bird); and by a "sinistral" specimen, one having the upper mandible crossing the lower to the bird's left side (that is, to the right side of an observer facing the bird).

Such close equality in the numbers of the two forms is quite surprising. If the proportions of the two forms observable in these particular specimens are fairly typical of the proportions which obtain in nature (and I saw no reason to doubt that they were), it appears that the two forms exist in astonishingly equal numbers.*

* There must surely have been some error of observation in connexion with the statement (*Mag. of Nat. Hist.*, 2nd ser., I., p. 165: 1837), by my old friend the late Mr. Joseph Clarke, F.S.A., of Saffron Walden, that "the mandibles of these birds are indiscriminately crossed, though, in by far the greater proportion of those that came into my hands, the upper crossed the lower one to the right." Mr. Clarke adds, in a footnote, that "only three out of twenty-seven that I examined [in 1835] were crossed to the left."

In this connexion, it is well to bear in mind the fact (which is well known*) that, in the nestling Crossbill the mandibles show no sign of crossing. I saw various instances in proof of this whilst counting the examples referred to above, but all such were disregarded. It appears, however, that the mandibles become fully crossed very soon after the young bird leaves the nest.

Another fact worth remembering is that the crossing is confined entirely to the horny sheath of the mandibles, their actual bony structure showing no signs of torsion, as may be seen by anyone examining the skull of a Crossbill.

These two latter facts afford evidence, no doubt, that the crossing of the mandibles is a feature which has been acquired by the species (and genus) within a very recent period. Further evidence pointing in the same direction is to be found in the fact (which I observed when examining the specimens above referred to) that the bill (which is well known to vary greatly in respect of length, size, and shape) varies also very widely in respect of *the extent of its crossing*, and this, to all appearances, independently of age, sex, and locality.

The fact that, in different examples, the bill of the Crossbill is crossed indifferently on either side affords, no doubt, further evidence that the crossing of the bill is a recently-acquired character. At the same time, it is by no means clear why examples having the bill crossed on either side should occur in such extraordinarily equal numbers as my figures seem to show that they do. One wishes it were possible to make observations to ascertain whether or not the crossing of the bill is what is termed a "Mendelian character." Probably, however, it is too recently acquired to be such.

The exact opposite of all this is, no doubt, the case in that extraordinary bird the Wry-billed Plover (*Anarhynchus frontalis*) of New Zealand,† which has its bill congenitally asymmetrical, even from the nest, both mandibles being always twisted dextrally, this peculiarity affecting not merely the horny sheath, but the actual bony structure of the bill. The bird is said habitually to run round stones—always from left to right (dextrally)—searching for food beneath them. In its case, no doubt, the twisted bill is a very ancient character.

MILLER CHRISTY.

* See, for example, Saunders (*Manual*, p. 194, 1889) and Newton (*Dict. of Birds*, p. 115, 1896).

† See Buller's *Birds of N. Zealand*, II., p. 9 (1888), and *Suppl.*, I., p. 177 (1905).

[This question was discussed in our pages (Vol. III., pp. 261-2) by Dr. C. B. Ticehurst, who came to the conclusion that in all the subspecies of *Loxia curvirostra* the crossing to either side was equal. In specimens of *L. leucoptera* examined by Dr. Ticehurst, the upper mandible passed to the left of the lower twice as often as to the right, but of this species only sixty-nine specimens were examined.]

Dr. J. J. Dwight (*Sequence of Plumages and Moults of Passerine Birds of New York*, p. 176) states of the American Crossbill (*Loxia c. minor*) that in sixty-eight specimens examined "the upper mandible crosses to the right in thirty-eight, and to the left in thirty." Of two hundred and thirty-two specimens of *Loxia c. curvirostra* which I have examined (not including those in the British Museum) one hundred and nineteen were dextral (as defined by Mr. Christy) and one hundred and thirteen sinistral. The bill begins to cross as soon as the primaries are fully grown, but before there is any sign of crossing the upper mandible is slightly curved downwards at the tip and projects beyond the lower mandible. When the tip of the lower mandible begins to grow upwards, it seems to me that it must be a matter of chance to which side of the upper it passes.—H.F.W.]

TREE-CREEPER HATCHING EGGS OF REDSTART.

IN 1912 I nailed up a piece of bark about six feet from the ground over a crevice in a *Wellingtonia* in a garden at Sywell, near Northampton. On May 21st, 1913, I found a Tree-Creeper's nest behind the bark, with the Creeper sitting; in the nest were two Tree-Creeper's eggs and six blue eggs. In time the blue eggs hatched; the Creeper's did not. I never saw a Redstart in the garden, but the Creepers fed the young birds regularly and they did well. I examined them when they were ready to fly, and found they had incipient red tails and were, in fact, Redstarts. There was no one about who would be in the least likely to meddle with the nest. Redstarts are not so common in the vicinity as to make a substitution of the eggs probable; moreover, it would have been extremely difficult to drop the eggs in without breaking them, as the distance from hole to nest was considerable. It therefore seems likely that the eggs were laid there by a Redstart.

A. E. ALDOUS.

FIRECREST IN NORFOLK.

It may be of interest to record that on November 6th, 1913, I shot a female Firecrest (*Regulus i. ignicapillus*) at Cley-by-Sea, Norfolk. The bird was by itself.

H. PAYNE WILLIAMS.

INCURSION OF WAXWINGS.

NORTHUMBERLAND.—“One Waxwing appeared in my garden at Stocksfield-on-Tyne on January 18th, and was again seen on January 19th. A flock of between twenty and thirty was seen near Dipton Woods, Riding Mill-on-Tyne, on February 22nd ” (J. S. T. Walton).

LINCOLNSHIRE.—One shot at Immingham on January 1st. One shot on the Humber Bank about January 6th (F. L. Blathwayt). One caught at Cleethorpes on December 28th, and another on January 13th; a third was seen on February 12th. One caught at Grimsby on February 2nd. None of these birds was accompanied by others of its species (W. E. Suggitt).

LANCASHIRE.—Although I have heard of several Waxwings having been seen about Lancaster during January, I can only vouch for the authenticity of two, which were shot during the first week in January (H. W. Robinson).

WORCESTERSHIRE.—One at Barnt Green on March 12th, feeding voraciously on rose-hips, was tame enough to allow of its being photographed from a short distance (A. T. Wallis). “I had under observation five, from February 14th to March 6th, in Malvern. They were very tame and could be seen feeding on berries at all times of the day (W. W. Lowe).

NORFOLK.—Mr. J. H. Gurney writes : “Since my last communication (*supra*, p. 294) more Waxwings have come in from the east and the total identified has crept up to one hundred and six, but it is probable that some have been counted twice over. Perhaps the most interesting observation yet made was the detection of a small flock on February 7th near the sea by Mr. Henry Cole of Cromer, who writes : ‘I counted fifteen in a flock on the wing which I should say were then landing (at Cromer) about 7.30 to 8 o’clock on Saturday morning. They went from the sea over to Roughton Heath direction,’ which would be almost straight inland. Several observers seem to have been struck by the tameness of these birds, but that is one of their characteristics in Finland, and does not arise, as at first thought, from starvation.”

CAMBRIDGESHIRE.—“The presence of two Waxwings in a garden in Cambridge was first observed by Mr. H. G.



WAXWING AT CAMBRIDGE.

(Photographed by Miss E. L. Turner.)



WAXWING AT CAMBRIDGE.

(Photographed by Miss E. L. Turner.)

Alexander on February 13th. They were feeding on the berries of *Cotoneaster affinis*. I first photographed them on February 14th. They were very tame but the light was

bad and the wind high. One bird had no 'wax' on the wings, and the other only one point on the right wing, and two on the left. They were not seen after the 15th. On February 28th another bird appeared on the same tree. It was very shy, and I had to stand quietly by the window for two hours before it would feed. This bird was brighter in plumage than the others, and had three points on each wing. I observed and photographed it on several succeeding days up to the 13th March, when the tree was nearly stripped of its berries. The bird sometimes sat and trilled for ten minutes at a time. The trill was well sustained and not unlike that of the Redpoll. It also uttered a long-drawn wheezing note like that of the Greenfinch. On no occasion did it open its bill when 'singing,' therefore the song was very subdued and somewhat plaintive. In its feeding attitudes it resembled the Crossbill. When hanging upside down the chestnut colour of the under tail-coverts was very conspicuous, and in this position it always fanned its tail so that the yellow tips were brilliantly displayed. On March 12th, which was a bright and cold day, the bird was quite tame and very hungry. It fluffed itself out and looked half as big again, evidently feeling the cold. It has not been seen since the 13th March" (E. L. Turner).

BEDFORDSHIRE.—One in December at Biggleswade, two at Bedford on January 20th, one at Sharnbrook on January 22nd (J. Steele Elliott, *Zool.*, 1914, p. 112).

HERTFORDSHIRE.—One at Haileybury seen by Mr. C. C. Champion on March 12th feeding on hawthorn berries remained in the same place until March 16th (F. W. Headley).

ESSEX.—One seen feeding on hawthorn berries on February 12th, 1914, at Westcliff-on-Sea. This is only the second example recorded from Essex (F. W. Frohawk). One (a single bird) shot at Margaretting on January 9th (J. Beddall Smith).

KENT.—"For the last three months there have been a pair of Waxwings in my father's garden at Broadstairs, but I believe the birds have disappeared within the last few days (March 12th)" (H. Payne Williams).

GLAMORGANSHIRE.—One seen in the neighbourhood of Cowbridge early in March (*South Wales Daily News*).

CO. ANTRIM.—Dr. J. L. Nevin of Ballymoney, co. Antrim, writes in the *Northern Whig* of February 21st: "A lady in this town gave me a description of a bird which she observed feeding with others in the yard adjoining her house during the last month, and from the intelligent account given of

the form of the bird, with the brilliant red and yellow markings on the wings and the head appendages, I had no doubt but that it was a Waxwing."

Co. ARMAGH.—A female was shot at Tanaghmore North near Lurgan, on January 2nd, 1914, and was presented to the Dublin Museum. It had been feeding almost exclusively on the berries of the wild rose (A. R. Nichols).

REDWING SINGING IN ENGLAND.

A REDWING (*Turdus musicus*) sang for ten minutes on March 6th, 1914, at Borrowdale, Keswick, Cumberland: it was a bright morning with occasional showers, and a strong west wind was blowing. I was within thirty feet of the bird, with binoculars.

NORMAN B. ASHWORTH.

[There has been a good deal of controversy as to whether the Redwing utters its *full* song in the British Islands, or only "records." In the fourth edition of *Yarrell*, I., p. 270, it is stated that "the inward twittering, which forms the final part of the song, may often be heard in this country in spring," etc., but other observers have stated that the full song is occasionally heard. Unless Mr. Ashworth knows the song of the species, it is difficult to say how far the bird in question reproduced the *full* song, which, however, is not a very elaborate or musical affair.—F.C.R.J.]

ROBIN SINGING AT NIGHT.

A ROBIN (*Dandulus r. melophilus*) which roosts outside my window, sings after dark practically every night. It sings rather spasmodically, sometimes one burst will follow a few minutes after another, and sometimes an interval of hours will elapse. Dr. J. T. Wills and I have heard it up to and after twelve o'clock for quite three weeks, and it is now March 8th.

J. H. OWEN.

INCUBATION OF THE PEREGRINE FALCON.

IN the late afternoon of April 29th, 1912, I found the eyrie of a Peregrine Falcon (*Falco p. peregrinus*) in the north of England containing two eggs, which the bird was covering. On May 1st there were three eggs. Later one egg disappeared: it may have fallen off the ledge, or possibly was sucked by some other bird; the third egg could not have been laid until April 30th. On June 1st the eyrie contained one nestling and one egg. There was a difference in the date of hatching, and afterwards, when there were two young ones, they showed a difference in size and also in development.

In another eyrie, visited on May 17th, 1913, when the three chicks were a few days old, one was quite twice the size of the smallest, while the third was intermediate in size. On June 14th much the same difference in size and development could be seen, and on June 25th, while two of the young Falcons had left the eyrie, one was still there.

The difference in size and development would be accounted for by a difference in the date of hatching, which itself would be accounted for by the bird starting to sit on the first egg.

DOUGLAS A. SCOTT.

[Mr. Scott's note is valuable as throwing some light on a subject on which at present we have no reliable data, viz., the incubation-period of the Peregrine. If the first-mentioned nest contained two fresh eggs on April 29th, the first egg must have been laid on April 26th or 27th. Unfortunately we cannot say whether the egg which disappeared was the earliest laid or one of the later eggs, but as one young bird hatched by June 1st it is possible that this was the second egg laid, in which case the first might have been hatched as early as May 29th. The maximum incubation-period in this case would be thirty-two days, but if the egg hatched on May 31st was the first laid, the period might possibly extend to thirty-five days. Macgillivray estimates it at a month on the authority of Mr. G. Craven, but this is obviously only approximate, and Tiedemann's statement (18-19 days) is certainly erroneous.

That the eggs of the Peregrine are laid with an interval of a clear day between each, and that incubation begins before the clutch is complete, may be regarded as certain, though curiously enough Dr. F. Heatherley, who has written recently on the subject of the Peregrine, was apparently unaware of the first rule, which probably holds good with all the Raptores.—F. C. R. JOURDAIN.]

MARSH-HARRIER IN SUSSEX.

ON March 9th, 1914, a male example of the Marsh-Harrier (*Circus aeruginosus*) was shot at Wartling, Sussex, and I examined it the same day. When shot it had just killed a Partridge.

H. W. FORD-LINDSAY.

GADWALL AND LITTLE GULL IN ESSEX.

It may be of interest to record that a fine old drake Gadwall (*Anas strepera*) and an example of the Little Gull (*Larus minutus*) were obtained at Manningtree, Essex, in December, 1913. The latter is now in my possession.

J. BEDDALL SMITH.

GREAT SHEARWATER IN SUSSEX.

ON March 14th, 1914, a specimen of the Great Shearwater (*Puffinus gravis*) was washed ashore at Bulverhythe, St. Leonards-on-Sea, Sussex, during a severe gale from the south-west. I saw the bird the same morning, when it proved to be a male, and had evidently not been long dead.

H. W. FORD-LINDSAY.

SLAVONIAN GREBE IN CARNARVONSHIRE.

As there are no recorded instances of the Slavonian Grebe (*Colymbus auritus*) from the north coast of Carnarvonshire, it may be worth mentioning that I watched one on January 24th, 1914, fishing along the foot of a cliff-wall on the north-easterly side of the Great Orme's Head.

RICHARD W. JONES.

MOULT OF THE COMMON SANDPIPER.

WITH reference to Mr. Teschemaker's note on this subject (*supra*, p. 269), I can state that I have a Common Sandpiper shot on April 17th, 1913, at Jhelum, Punjab, India, which is not only moulting the whole of its body-feathers but also just finishing a moult of its tail and the whole of its wings. Three other examples, shot during the first ten days of May, show every sign of having just completed an entire moult, but I can find no feathers in the quill. One shot on December 12th has all the feathers of body, wings, and tail slightly worn.

C. B. TICEHURST.

COMMON SANDPIPERS IN WINTER IN SURREY
AND ESSEX.

FROM time to time the Common Sandpiper (*Totanus hypoleucus*) has been recorded during the winter months. On February 25th, 1914, I heard two of these birds passing over Wellington, Surrey, at 6.30 p.m., going in a westerly direction. The wind at the time was very slight from the west. On February 16th, 1910, at 11.30 p.m., I also heard one passing over Rayleigh, Essex.

F. W. FROHAWK.

UNUSUAL WINTER-MIGRATION OF
WOODCOCK.

WE have had a most unusual immigration of Woodcock (*Scolopax rusticola*) in east and north-east Yorkshire this winter. The usual numbers arrived in October and November and passed away westward as usual. Up to January 2nd, 1914, the normal winter numbers only were observed in Burton Constable Woods. On January 8th

ten were shot and more were seen there. On January 11th one was found in a garden at Hornsea, and on January 12th two more were seen by a gardener there, quite exhausted.

On the 19th at Winestead nineteen were shot and many more put up, whilst at the same time Goldcrests were present in large numbers. During the same period several Woodcock were shot near Beverley. At Winsetts on the Humber ten were shot. Eighty to ninety were shot in two days on the Scarborough racecourse, and at Boynton, near Bridlington, on January 23rd, thirty were shot. On January 29th fourteen, and on January 31st twelve were shot at Burton. On February 14th they had completely disappeared. In a great many cases the birds were in open grassland, sometimes far from woods and from their usual haunts at this time of the year.

The return journey of the Woodcock in east Yorkshire usually commences in January, and the birds frequent our coverts till May, though they never stay to breed, but the journey is apparently leisurely. Small parties only are seen and then never far from their usual feeding-grounds.

The present numbers are altogether abnormal, and point to a large and sudden immigration. At the time a strong south-easterly wind was blowing, the birds were very exhausted and dropped in the most unlikely places. The fact of their staying in the neighbourhood till early February, instead of passing on at once, is also unusual. I may add that, with very few exceptions, they were in good condition. Perhaps some of your correspondents can tell me where they came from.

Correspondence with shooting men in the south-west of Ireland has shown that our birds pass on there from the autumn immigration, but in the present case these correspondents state that there has been no diminution in the numbers of birds there. They must therefore have come from abroad, though the direction of the wind—south-east—would hardly be favourable for a flight from the Continent. The exceptionally hard weather prevailing all over Scandinavia, the Baltic provinces, and Holland and Belgium, precludes the idea of their having come from that direction, and if they came from further south the question suggests itself as to whether that is the place of origin of, at any rate, some of our autumn immigrants as well as the goal of the return-home wave which usually commences in east Yorkshire in January.

E. W. WADE.

[The most reasonable explanation of the above recorded immigration of Woodcocks would seem to be that it was a weather-movement from some part of the Continent, such as takes place almost every winter on a larger or smaller scale in the case of the Thrushes, Sky-Lark, Starling, etc., and which is an exact reproduction of the ordinary movements of the autumn migration initiated by a sudden fall of temperature and other weather alterations, making the selection of new winter-quarters a necessity.

In the case of the Woodcock, such a winter migration would appear to be quite unusual, their food supplies in Scandinavia and northern Europe generally probably having become already inaccessible at about the same time as the normal late autumn-passage movement of the species in November, which therefore might itself almost be regarded as a "weather migration." The Thrushes and other Passeres, on the other hand, would be able to live for a long time under conditions that the Woodcocks would not be able to withstand.

Normally, therefore, there are probably no Woodcock left in northern Europe to supply the birds for a later winter movement. On this theory we must imagine that the winter up to, say, the end of December, 1913, was an unusually mild and open one in some part of Scandinavia or northern Europe, so that a certain proportion of Woodcock remained behind, and that about the new year a sudden fall in temperature or a heavy snow-fall took place and forced them to seek fresh quarters. It remains to be discovered whether such conditions did actually exist in the areas and at the times specified. Mr. Wade refers to the exceptionally hard weather prevailing all over Scandinavia, etc., but it is not clear when these conditions began.

Other points which seem to support this explanation are: (i.) a proportion of the birds, at any rate, were exhausted, and had therefore probably made a long over-sea passage; (ii.) they appear to have dropped down in unusual and unlikely places, just as tired over-sea migrant Woodcock do; (iii.) the area of arrival is very much the same as that of the ordinary autumn-migrants; (iv.) like the latter also, their arrival seems to have coincided with that of a certain number of Goldcrests; (v.) there was an undoubted arrival of migrants, though in lesser numbers, about the same time in Suffolk.

It would be interesting to know whether the same movement was noticed on the east coast and northern

isles of Scotland, as if so it would lend considerable support to the above theory. The influence of the wind mentioned by Mr. Wade is, I am convinced, often made of too much importance. It does not, of course, follow that because a south-easterly wind was blowing on the Yorkshire coast that the wind was in the same direction and of the same force at the point and time when the birds started. Moreover, I cannot agree that a south-easterly wind would be unfavourable to birds crossing the North Sea, and have always thought it was the opinion of experienced observers that Woodcocks almost invariably do arrive on our east coasts at a time when the wind is blowing from some easterly point.

I may add that the light records for January do not help us one way or the other, as they are entirely negative, the moon reaching its full on the 12th of the month. The emigratory theory may be, I think, at once dismissed: it was too early in the year; the birds were tired and had evidently *not* been engaged in the leisurely northern return movement: they were for the most part *not* found in usual Woodcock haunts, and they were concentrated in unusual numbers and many remained for a month or six weeks.—N.F.T.]

LESSER BLACK-BACKED GULLS IN LANCASHIRE IN WINTER.

It may be of interest, in reference to the status of *Larus fuscus affinis* and *L. f. fuscus* in Britain in winter, to give the following notes of those I have seen on Skerton Weir, Lancaster, during the past winter. In several cases the birds in question were in company with one or more Great Black-backed Gulls, and in nearly all cases with Herring-Gulls, so that the intensity of the colour of the mantle could be judged fairly accurately by comparison with these, but in no case are flying birds included, these being ignored altogether, as the colour of their mantles could not be gauged with any accuracy. I will call them light and dark respectively, as I could not be absolutely certain of their identity, but give my observations for what they may be worth:—

With dark mantles: 1913.—November 5th and 8th, one; December 1st and 6th, one. 1914.—January 29th, two; February 1st and 4th, one, 18th two, 19th three, 21st, 24th and 25th, one; March 12th, one among seventeen or eighteen light; March 13th four among a dozen light; March 19th and 21st, one.

With light mantles: 1913.—November 10th one and December 6th, two. 1914.—February 19th one, 23rd and 24th, two, 25th five, 26th and onwards several seen every day.

I might add that Lesser Black-backed Gulls were very scarce this winter in this neighbourhood—indeed, I have never known so few.

On May 29th, 1913, I saw on Walney Island a Lesser Black-backed Gull, which was quite as dark as a Great Black-backed Gull near to it, and I think there is no doubt that this was an example of *Larus f. fuscus*, though the date may seem abnormal enough.

H. W. ROBINSON.

BLACK GUILLEMOT IN LANCASHIRE.

ON February 18th a specimen of the Black Guillemot (*Uria g. grylle*) was captured alive on a pond at Hare Tarn, near Carnforth, north Lancashire, by a farm hand, who took it to Mr. E. Murray, the Carnforth taxidermist. I saw the bird there, and found that it was an immature female. The only other occurrence of this species in Lancashire is one mentioned in the *Report of the Bury Natural History Society* of 1871, where it is stated that a young bird was found dead at Summerseat by Mr. H. Pickup of that place.

H. W. ROBINSON.

PARASITISM IN RELATION TO BIRDS.—Mr. H. V. Jones writes under this title (*Zool.*, 1914, pp. 41-53) of various species of tapeworms found in a number of species of birds. Mr. Jones considers it probable that the occurrence of particular parasites in a certain species of bird may have relation to the diet characteristic of that species.

SUMMER-MIGRANTS IN WINTER.—Mr. C. S. Ticehurst states (*Field*, 21.II.14, p. 409) that a solitary Swallow (*Chelidon r. rustica*) frequented Playden, Sussex, up to December 5th, 1913, and that another appeared on February 12th, 1914, and remained for ten days. Mr. P. F. M. Galloway records that a Sand-Martin (*Riparia r. riparia*) was seen near Reading about ten days before Christmas (*Avicultural Mag.*, V., p. 178). Mr. F. J. Stubbs states that a Land-Rail (*Crex crex*) was shot at Oxted, Surrey, on January 27th (*Zool.*, 1914, p. 76).

STATUS OF THE GADWALL IN STAFFORDSHIRE (*antea*, p. 261).—Mr. J. R. B. Masefield calls our attention to another record of the Gadwall from Patshull in 1908. On investigation we find that the species has been definitely reported on five occasions from Staffordshire, viz., at Comberford, near Lichfield, in 1873, at Lichfield, in 1881; at Patshull in 1905 and 1908, and at Stretton in 1913.

BRITISH BIRDS

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SNIFE AND REDSHANK NESTING IN SUSSEX.

BY

COLONEL H. W. FEILDEN.

BORRER, in his excellent work *The Birds of Sussex*, published nearly a quarter of a century ago, thus summarizes the status of the Common Snipe in the county as a breeding species: "The Snipe breeds sparingly in Sussex, but the nest has been found now and then on the aforesaid Common [Henfield], as well as on the heaths near Balcombe, and on Ashdown Forest, Pevensey Level, and Horsham." Dr. N. F. Ticehurst, in his recent *History of the Birds of Kent* writes: "I cannot help thinking that many more [Snipe] breed in Kent than is generally thought. They nest regularly in the neighbouring counties of Sussex and Surrey, at no more than a mile or so from the county boundary, but the fact remains that no more than five or six nests have been found in Kent."

In this Magazine (Vol. VI., p. 21) Mr. R. E. Cheesman reports the nesting of a pair of Snipe at Benenden (Kent) in 1912, and Dr. Ticehurst comments as follows: "On April 30th, 1910, I was able to verify for myself the breeding of the Snipe in the Wittersham Levels referred to on page 453 of my book; some six pairs were 'drumming' there, and I found one nest. The only other record I have since received is one from Colonel J. M. Rogers, who found a nest of four eggs in process of hatching in the Darenth valley on May 11th, 1908."

A. E. Knox, in his charming *Ornithological Rambles in Sussex*, written sixty years ago, when we might expect the species was more abundant than it is to-day, does not, to the best of my recollection, even refer to the

breeding of the Snipe in Sussex, and in his *Systematic Catalogue* merely writes, "Tolerably abundant in the winter, on moors and extensive tracts of low meadow-land after the subsidence of great floods."

The parish of Burwash, though yearly becoming more and more a residential district, still retains some sequestered and marshy spots where Snipe breed. It is, however, in the meadows bordering the river Rother and its tributary, the Dudwell, in their courses through Burwash parish and the adjoining one of Etchingham, which are frequently flooded during heavy rains, that nesting Snipe are found in any numbers. These meadows, locally called "brook-lands" or simply "brooks," have in some cases a fair sprinkling of rushes and long grasses, and in these tussocks the Snipe make their nests.

In Dallington forest two or three pairs of Snipe breed, and though I have never actually found the nest of a Snipe in the forest, yet I have put up in marshy spots old and young birds together, the latter just able to fly at the end of May.

Ten years ago it is questionable if a pair of Snipe nested in the "brooks" of Burwash parish. About that time Mr. Foster of Fontridge, the proprietor of the land I am referring to, put a stop to the taking of eggs by trespassers on his estate. After the second season of protection a single pair of Snipe was found breeding, and the number increased yearly until at the present time it would not be an over-estimate to conclude that not less than five-and-twenty pairs of Snipe are nesting this spring in the area of "brook-lands" owned by Mr. Foster. On April 10th I flushed at least twelve pairs, presumably nesting, from a rushy marsh of not more than three acres.

One of the nests I found had four eggs. Of course I did not find all of the twelve nests, the ground being boggy and difficult, but no doubt they were there. This may seem almost incredible, but in Stevenson's *Birds of Norfolk*, Vol. II., p. 306, Professor Newton described a small but singularly productive breeding-ground of this species that formerly existed at Barnham near Thetford, on the property of the Duke of Grafton, where in one oasis not much larger than a good-sized garden, in the breeding-season, there may have been from a dozen to a score of pairs. As the Burwash and Etchingham Snipes' nests are well preserved from trespassers intent on egg-stealing, one might imagine that their contents should all be safely hatched, but the head keeper informs me that they have an enemy in the Rooks, which, especially in dry weather, hunt the "brooks" and destroy a considerable number of eggs of Snipe and Lapwings. The first Snipe's egg I saw this spring was on April 6th. It seems to me that the re-establishment of the Snipe as a fairly common breeding species in the parishes of Etchingham and Burwash is an interesting and pleasing fact.

Under this system of protection Redshanks have taken up nesting-quarters in Burwash and Etchingham parishes in the same areas where the Snipe breed: a few years ago they were absent from these parts. It appears to me that the presence of Redshanks is not so much an extension of their breeding-range into a narrow wood-girt vale of the Sussex Weald, but rather a return to ancient breeding-grounds. The valley of the Rother from Etchingham to its mouth is overspread with recent alluvium—at no very distant geological period it must have been estuarine.

In historic times the tidal wave flowed as far as Newenden, and the Rother was navigable to Etchingham. In those days the valley of the Rother and the outlets of its smaller tributaries, such as the Dudwell, must have been a paradise for marsh-loving birds; and as few birds show closer attachment to their breeding-grounds than the Redshank, they instinctively return to their primordial breeding-haunts if sufficient protection be accorded them: there are now some eight pairs nesting. As they do not arrive till the end of March, and leave before the shooting-season commences, they remain undisturbed during their stay.

RECOVERY OF MARKED BIRDS.

THE following have kindly sent in subscriptions towards the expenses of the Marking Scheme since the last acknowledgment was made: Messrs. A. E. Aldous, J. S. Allison, C. F. Archibald, A. Bankes, R. M. Barrington, R. O. Blyth, P. A. Buxton, the Duke of Buccleuch, Messrs. C. T. Cobbold, E. de Hamel, Miss M. Garnett, Dr. P. Gosse, Mr. H. S. Greg, the London Natural History Society, Dr. H. J. Moon, Messrs. N. Noble, H. L. Popham, W. C. Tait and Capt. C. H. T. Whitehead.

STARLINGS (*Sturnus v. vulgaris*).—13214, adult, marked by Capt.

J. H. W. Seppings at York, on Feb. 8th, 1912. Reported by Mr. S. H. Smith at Skelton, near York, on Jan. 7th, 1914.

42678, nestling, marked by Mr. J. R. B. Masefield at Cheadle, Staffordshire, on May 29th, 1913. Reported by Mr. E. S. Wilkinson at Bootle, Lancashire, on Feb. 13th, 1914.

46322, immature, marked by Mr. W. E. Suggitt at Cleethorpes, Lincolnshire, on Aug. 9th, 1913. Reported by Mr. W. D. Harvey at Gedling, Nottinghamshire, on Jan. 17th, 1914.

16812, marked as 46322 on Sept. 11th, 1912. Reported by Mr. H. Garman at Walpole St. Andrew, near Wisbech, Cambridgeshire, on March 22nd, 1914.

46734, marked as 46322 on Oct. 14th, 1913. Reported by Miss E. E. Williams at the same place on March 16th, 1914.

46184, marked as 46322 on July 17th, 1913. Reported by Mr. A. Wringe at Grimsby on April 7th, 1914.

41497 and 46605, marked as 46322 in July and Sept., 1913. Recovered near the same place on Jan. 13th and 14th, 1914.

42342, adult, marked by Mr. T. C. Hobbs at Gosforth, Northumberland, on Oct. 26th, 1913. Reported by Mr. W. Wilson at Canonbie, Dumfriesshire, on Feb. 3rd, 1914.

41353, marked as 42342 on Dec. 31st, 1912. Reported by Mr. F. Reah at the same place on March 17th, 1914.

13335, young, marked by Dr. N. F. Ticehurst at Huntbourne, Tenterden, Kent, on May 24th, 1911. Reported by Mr. G. Semark at High Halden, Ashford, Kent, on Feb. 14th, 1914.

Ticehurst, Tenterden, 170, nestling, marked by Dr. C. B. Ticehurst at Huntbourne, Tenterden, Kent, on May 23rd, 1908.

Recovered, feeding young, at same place on June 28th, 1913.

LINNET (*Carduelis c. cannabina*).—T405, nestling, marked by Dr.

H. J. Moon at the Fylde, Lancashire, on Aug. 29th, 1913. Reported by Mr. R. Cardwell at Marton, near Blackpool, Lancashire, on Jan. 8th, 1914.

CHAFFINCH (*Fringilla c. cælebs*).—C534, adult, marked by Mr. J. Bartholomew at Torrance, near Glasgow, Stirlingshire, on Dec. 2nd, 1911. Caught at the same place on Dec. 15th, 1913, and ringed again with T799.

D574, nestling, marked by Mr. H. W. Ford-Lindsay at Pett, Sussex, on May 19th, 1912. Recovered at the same place on March 11th, 1914.

C142, adult, marked by Mr. N. H. Joy at Bradfield, Berkshire, on Feb. 12th, 1911. Recovered at the same place on March 1st, 1914.

S558, adult, marked by Mr. M. Portal at Hexham, Northumberland, on July 26th, 1913. Recovered at the same place on Jan. 15th and in April, 1914.

J199 and S509, marked as S558 in June and July, 1913.
Recovered at the same place at the beginning of April, 1914.

YELLOW BUNTING (*Emberiza c. citrinella*).—H772, marked as S558 on July 8th, 1912. Caught again at the same place on Jan. 14th, 1914. Ring replaced and bird released.

SKY-LARKS (*Alauda a. arvensis*).—19619, nestling, marked by Dr. H. J. Moon at the Fylde, Lancashire, on June 28th, 1912. Reported by Mr. L. Shaw at Lytham, Lancashire, about Feb. 1st, 1914.

43047, nestling, marked as 19619 on May 23rd, 1913. Reported by Mr. J. W. Whitehead as killed by a golf-ball at St. Annes-on-Sea, Lancashire, on Feb. 28th, 1914.

MEADOW-PIPIT (*Anthus pratensis*).—O35, nestling, marked as 19619 on July 11th, 1913. Reported by Mr. Lacy Rumsey near Lisbon, Portugal, beginning of Feb., 1914.

BRITISH NUTHATCH (*Sitta europæa britannica*).—N467, adult, marked by the London Natural History Society at Woodford, Essex, on Jan. 10th, 1913. Caught at the same place on Jan. 12th, 1914, ringed again and released.

GREAT TITS (*Parus m. newtoni*).—R883, nestling, marked by Miss C. M. Acland at Banstead, Surrey, on June 25th, 1913. Reported by Mr. Hobden at Wallington, Surrey, on Jan. 5th, 1914.

N478, adult, marked by the London Natural History Society at Woodford Green, Essex, on June 1st, 1913. Reported by Mr. R. M. P. Sen at the same place on March 11th, 1914.

N448, marked as N478 on Dec. 29th, 1912. Caught at the same place on Dec. 31st, 1913, ringed again and released.

BLUE TIT (*Parus c. obscurus*).—L260, adult, marked by the London Natural History Society at Hale End, Essex, on June 4th, 1913. Reported by Mr. T. Willmott at Walthamstow, Essex, on Dec. 24th, 1913.

BRITISH SONG-THRUSHES (*Turdus p. clarkei*).—13356, nestling, marked by Mr. T. F. Greenwood at Hebden Bridge, Yorkshire, on July 10th, 1911. Reported by Mr. A. Pickles at the same place on Feb. 24th, 1914.

13608, nestling, marked by Mr. H. W. Ford-Lindsay at Pett, Sussex, on June 4th, 1911. Recovered at the same place on Jan. 17th, 1914.

N965, nestling, marked by Mr. C. Hyslop (gamekeeper to Mr. H. S. Gladstone), at Thornhill, Dumfriesshire, on April 27th, 1913. Reported by Mr. Jas. Murray at Enniskean, co. Cork, on Jan. 22nd, 1914.

45079, nestling, marked by Dr. H. J. Moon at the Fylde, Lancashire, on June 26th, 1913. Reported in the *Shooting Times* as recovered at Malahide, co. Dublin, on Jan. 25th, 1914.

46568, immature, marked by Mr. W. E. Suggitt at Cleethorpes, Lincolnshire, on Sept. 4th, 1913. Reported by Mr. P. Bannard at Banbury, Oxfordshire, on Dec. 31st, 1913.

46329, marked as 46568 on Aug. 9th, 1913. Reported by Mr. F. Atkinson at the same place on Jan. 12th, 1914.

19093, nestling, marked by Miss C. M. Acland at Banstead, Surrey, on May 27th, 1912. Recovered at the same place on Aug. 28th, 1913.

19274, nestling, marked by Mr. J. Bartholomew at Torrance, near Glasgow, Stirlingshire, on June 16th, 1913. Reported by Mr. W. S. Davidson, two miles from Newcastle-on-Tyne, Northumberland, on April 3rd, 1914.

BLACKBIRDS (*Turdus m. merula*).—46240, immature, marked by Mr. W. E. Suggitt at Cleethorpes, Lincolnshire, on Aug. 4th, 1913. Reported by Dr. A. Commenge near Brest (Finistère), France, on Oct. 23rd, 1913.

40602, nestling, marked by Miss J. Crookes at Hope, Derbyshire, on April 28th, 1913. Reported by Mr. Thomas Coffey at Clonmel, co. Waterford, on Dec. 22nd, 1913.

41333, adult female, marked by Dr. H. J. Moon at the Fylde, Lancashire, on Jan. 23rd, 1913. Reported by Mr. F. W. Sherwood at same place on March 3rd, 1914.

18534, nestling, marked by Mr. R. O. Blyth at Stanmore, Middlesex, on April 13th, 1913. Reported by Mr. E. Finch at Finchley, Middlesex, on March 4th, 1914.

42344, adult, marked by Mr. T. C. Hobbs at Newton-by-Sea, Northumberland, on Aug. 6th, 1913. Reported by Mr. W. Hope at the same place on Jan. 3rd, 1914.

REDBREASTS (*Dendralus rubecula*).—4558, adult, marked by Mr. C. F. Archibald at Ulverston, Lancashire, on Oct. 11th, 1912. Caught again at the same place on Jan. 1st, 1914. Ring replaced and bird released.

N621, adult, marked by Mr. P. A. Buxton at Tonbridge, Kent, on Jan. 15th, 1913. Recovered at the same place on Dec. 30th, 1913.

L495, nestling, marked by Mr. N. H. Joy at Bradfield, Berkshire, on June 30th, 1913. Recovered at the same place on Dec. 17th, 1913.

0797, nestling, marked by Mr. J. R. B. Masefield at Longton, Staffordshire, on June 18th, 1913. Reported by Professor Sarrade in Gers, France, in October, 1913.

HEDGE-SPARROWS (*Prunella modularis*).—H943 and N228, adults, marked by Mr. W. E. Suggitt at Cleethorpes, Lincolnshire, on Aug. 12th and Oct. 3rd, 1912. Recovered at same place on Oct. 4th and 11th, 1913.

42596, immature, marked by Miss and Mr. Buxton at Tonbridge, Kent, on July 19th, 1913. Caught again at the same place on Dec. 29th, 1913 and Jan. 18th, 1914. Ring replaced and bird released.

BRITISH GREEN WOODPECKER (*Picus v. pluvius*).—Ticehurst, Tenterden, 467, nestling, marked by Dr. C. B. Ticehurst at Huntbourne, Tenterden, Kent, June 23rd, 1909. Reported by Mr. Allchin on Clay Hill, Tenterden, about three miles south-west of birth-place, on Dec. 27th, 1913.

BARN-OWLS (*Tyto a. alba*).—8220, nestling, marked by Mr. N. H. Joy at Penshurst, Chiddingstone, Kent, on July 5th, 1910. Reported by Mr. L. Maxwell at Buckhurst Park, Withyham, near Tunbridge Wells, on Jan. 23rd, 1914.

38, nestling, marked by Mr. N. H. Joy at Bradfield, Berkshire, on May 31st, 1913. Reported by Mr. H. G. Cox near Pangbourne, Berkshire, on March 11th, 1914.

MERLIN (*Falco r. regulus*).—25551, nestling, marked by Mr. J. D. Patterson at Goathland, Yorkshire, on June 20th, 1912. Reported by Mr. H. Gray at North Cave, Yorkshire, in September, 1913.

COMMON HERONS (*Ardea cinerea*).—50032, nestling, marked by Mr. A. Mayall near Scourie, Sutherlandshire, on June 16th, 1912. Reported by Mr. J. McNicol at Thurso, Caithness, early in Dec., 1913.

50207, nestling, marked by Mr. J. R. B. Masefield near Cheadle, Staffordshire, on May 27th, 1911. Reported by Mr. W. H. Davis at Lechlade, Gloucestershire, on Dec. 18th, 1913.

50303, marked as 50207 on May 7th, 1913. Reported by Mr. B. Hodgson at Morecambe, Lancashire, on Feb. 21st, 1914.

MALLARD (*Anas p. platyrhynchos*).—Nineteen birds, hatched from Wild Ducks' eggs taken at Shadwell Court, Thetford, Norfolk, ringed and given their liberty at the same place as soon as they were old enough in June, 1912. All recovered at the same place from Aug. 14th, 1912, to Jan. 27th, 1914.

32636, adult, marked by Mr. M. Portal at Leswalt, Wigtownshire, on Feb. 28th, 1913. Reported by Dr. Einar Lönnberg at Ofverstbyn, Gunnarsbyn, Ranea, Swedish Lapland, in Nov., 1913.

32621, 32623, 32625, 32630, 32632, 32633, 32638, marked as 32636. Recovered at same place in Oct., Nov., Dec., 1913, and Jan. and Feb., 1914.

31245, nestling, marked by Mr. F. W. Smalley at Silverdale, north Lancashire, on July 20th, 1911. Reported by Mr. H. Ingleby at King's Lynn, Norfolk, on Jan. 31st, 1914.

50117 and 50118, marked as 31245 on July 4th, 1912. Recovered at the same place on Oct. 10th, 1913 and Feb. 3rd, 1914.

TUFTED DUCK (*Nyroca fuligula*).—33481, nestling, marked by Mr. W. Meech per Lord William Percy at Alnwick, Northumberland, on Aug. 4th, 1913. Reported by Mr. M. Portal near Corbridge, Northumberland, on Dec. 20th, 1913.

CORMORANTS (*Phalacrocorax c. carbo*).—50408, 100555, 50692, 100577, and 100561, nestlings, marked by Mr. R. M. Barrington on Saltee Islands, co. Wexford, in June, 1913. Recovered on Lough Neagh (Aug., 1913), in co. Dublin (Dec., 1913), Devonshire (Jan., 1914), Douarnenez Bay (Finistère), France (Nov., 1913), Lorient (Morbihan), France (Feb., 1914).

100628, 100643, 100657, 100675, nestlings, marked by Miss A. Pease on Farne Islands, Northumberland, on Aug. 2nd, 1913. Recovered in Kent, Yorkshire, Northumberland and Fifeshire in Dec., 1913, and Jan., 1914.

SHAG (*Phalacrocorax g. graculus*).—50770, nestling, marked by Mr. R. M. Barrington at Saltee Islands, co. Wexford, on June 19th, 1913. Reported by Mr. G. Jenkin at Ballincurra, co. Cork, on March 17th, 1914.

MANX SHEARWATER (*Puffinus p. puffinus*).—28215, adult, marked by Mr. N. H. Joy at Annet, Scilly Isles, on June 18th, 1912. Reported by M. R. de Madec on the Glenan Isles (Finistère), France, middle of Jan., 1914.

WOOD-PIGEON (*Columba p. palumbus*).—21699, nestling, marked by Mr. A. G. Leigh at Hampton-in-Arden, Warwickshire, on July 13th, 1911. Reported by Mr. H. Haynes near Birmingham, Warwickshire, on Mar. 5th, 1914.

OYSTERCATCHERS (*Hæmatopus o. ostralegus*).—14154, nestling, marked by Mr. R. E. Knowles at Holy Isle, Anglesey, on June 3rd, 1911.

Reported in the *Shooting Times* by Mr. A. E. Crowdy at Malldraeth Bay, Anglesey, on Dec. 22nd, 1913.

8981, nestling, marked by Miss A. C. Jackson at Evanton, Ross-shire, on July 3rd, 1910. Reported by Miss S. M. Heysham at Port Carlisle, on Solway Firth, on Jan. 31st, 1914.

LAPWINGS (*Vanellus vanellus*).—10852, nestling, marked by Mr. J. Bartholomew at Torrance, near Glasgow, Stirlingshire, on May 31st, 1911. Reported by Senor H. G. Fierro on the river Nalon at Soto del Barco, Asturias, Spain, on Jan. 4th, 1914.

19259, nestling, marked by Mr. J. Bartholomew at Kinnelhead, Dumfriesshire, on June 12th, 1913. Reported by M. L. Chagnolleau at Muzillac (Morbihan), France, on Jan. 25th, 1914.

45317, nestling, marked by Miss M. H. Greg at Mottram, Prestbury, Cheshire, on June 12th, 1913. Reported by M. E. Chasseriaud at Vasleville (Manche), France, on Jan. 25th, 1914.

45309, nestling, marked by Miss M. H. Greg at Ringway, Cheshire, on June 14th, 1913. Reported by Mr. J. D. Chapman at Ferns, co. Wexford, on Jan. 1st, 1914.

19411, nestling, marked by Miss S. M. Heysham on Rockcliffe Marsh, Cumberland, on May 23rd, 1912. Reported by Mr. D. Hearn at Tramore, co. Waterford, on Jan. 1st, 1914.

13809, nestling, marked by Capt. W. F. Mackenzie at Ballychruggan, Cromarty Firth, Ross-shire, in the summer of 1912. Reported by Mr. G. Rankin near Crumlin, co. Antrim, on Jan. 11th, 1914.

42802, nestling, marked by Mr. C. Hyslop at Thornhill, Dumfriesshire, on May 9th, 1913. Reported by Mr. W. Gilmartin at Chaffpool, co. Sligo, on Feb. 9th, 1914.

18907, nestling, marked by Mr. A. Bankes near Salisbury, Wiltshire, on June 13th, 1912. Reported by Dr. Jamault near Crozon, (Finistère) France, on Jan. 10th, 1914.

19652, nestling, marked by Mr. R. E. Knowles on the east Cheshire Hills on June 21st, 1912. Reported in the *Shooting Times* at Stretford, Lancashire, on February 7th, 1914.

13961, nestling, marked by Mr. A. G. Leigh at Hampton-in-Arden, Warwickshire, on June 22nd, 1911. Reported by Mr. D. Carleton forty miles inland from Casablanca, Morocco, on Jan. 7th, 1914.

COMMON REDSHANK (*Tringa totanus*).—18350, nestling, marked by Mr. H. S. Gladstone at Thornhill, Dumfriesshire, in the spring of 1913. Reported by Mr. J. Wilson at Glencaple, Dumfries, on Dec. 23rd, 1913.

COMMON CURLEW (*Numenius a. arquata*).—25728, nestling, marked by Mr. A. Mayall at Altnaharra, Sutherlandshire, on June 1st, 1912. Reported by Mr. A. Nicolson at Dunvegan, Isle of Skye, on Dec. 27th, 1913.

COMMON SNIFE (*Gallinago g. gallinago*).—18211, nestling, marked by Mr. R. E. Knowles on the east Cheshire Hills on May 16th, 1912. Reported by Mr. R. C. Dale near Kinsale, co. Cork, on Dec. 29th, 1913.

WOODCOCKS (*Scolopax rusticola*).—16965, nestling, marked by Mr. J. H. Milne-Home at Canonbie, Dumfriesshire, on May 8th, 1913. Reported by Mr. L. Seymour at Brampton, Cumberland, on Dec. 4th, 1913.

16972, marked as 16965 on May 7th, 1913. Reported by Lord Henry Scott at the same place on Dec. 12th, 1913.

16971, marked as 16965 on May 3rd, 1913. Reported by Mr. P. H. Holt at Penton, Carlisle, Cumberland, on Jan. 12th, 1914.
 16967, marked as 16965 on May 8th, 1913. Reported by Sir G. Colthurst at Blarney, co. Cork, on Dec. 30th, 1913.
 16929, nestling, marked by Mr. J. H. Milne-Home at Langholm, Dumfriesshire, on May 1st, 1912. Reported by Mr. M. H. Rutledge at Shrute, Tuam, co. Galway, on Jan. 30th, 1914.
 12398, nestling, marked by Mr. Sutherland, per Mr. M. Portal, at Cawdor, Nairnshire, on May 22nd, 1911. Reported by Sir Hervey Bruce in co. Londonderry about three miles from the coast, on Feb. 21st, 1914.

SANDWICH TERNS (*Sterna s. sandvicensis*).—45908, nestling, marked by Miss A. Pease on Farne Islands, Northumberland, on July 9th, 1913. Reported by Mr. R. M. Ackah at Aforénou, near Assinie, Ivory Coast, Africa, on Feb. 9th, 1914.
 6045, nestling, marked by Mr. H. W. Robinson at Ravenglass, Cumberland, on June 25th, 1910. Reported by M. H. Batardy at Arcachon (Gironde), France, on March 28th, 1914.

HERRING-GULLS (*Larus a. argentatus*).—8375, nestling, marked by Miss A. C. Jackson at North Sutor, Cromarty, Ross-shire, on June 24th, 1912. Reported by Dr. T. C. Mackenzie at Inverness in Jan., 1914.

497, nestling, marked by Dr. N. F. Ticehurst on Bardsey Island, Carnarvonshire, on June 20th, 1913. Reported by Mr. P. J. Tworney at Mumbles, Glamorganshire, on Dec. 29th, 1913.
 62546, marked as 497. Reported by Mr. D. E. Crockett at Lambay Island, Rush, co. Dublin, on Jan. 1st, 1914.

BRITISH LESSER BLACK-BACKED GULLS (*Larus f. affinis*).—9982, nestling, marked by Mr. H. W. Robinson at Foulshaw, Westmorland, on July 8th, 1913. Reported by Mr. W. C. Tait at Lisbon, Portugal, on Jan. 2nd, 1914.
 31428, marked as 9982 on July 1st, 1911. Reported by Mr. A. Delaleuca at Cadiz, Spain, on March 20th, 1914.
 31414, marked as 9982 on July 1st, 1911. Reported by M. le Goaster at Lisbon, Portugal, on March 8th, 1914.
 34075, marked as 9982 by Mr. F. W. Smalley. Reported by Mr. C. O. Harrison at Vigo Bay, Spain, on Feb. 8th, 1914.
 33891, nestling, marked by Miss A. Pease at Farne Islands, Northumberland, on Aug. 2nd, 1913. Reported by Major P. Swanston at Lanzarote, Canary Islands, on Jan. 5th, 1914.
 33791, marked as 33891. Reported by Mr. J. A. Reis at Lisbon, Portugal, at the beginning of February, 1914.
 33851, marked as 33891. Reported by Mr. J. A. Reis at Villa do Conde, Portugal, about Feb. 15th, 1914.
 33853, marked as 33891. Reported by Messrs. L. Rumsey and A. Pane at Lisbon, Portugal, on March 17th, 1914.

MARKED ABROAD AND RECOVERED IN ENGLAND.

STARLING (*Sturnus v. vulgaris*).—Rossitten, No. 7043, nestling, marked at Lidsen, near Wolmar, Livonia, Russia, in June, 1912. Reported by Mr. W. J. Clarke at Scarborough, Yorkshire, on Jan. 1st, 1914.

WIGEON (*Anas penelope*).—Mortensen, Viborg, No. 036, marked on the Isle of Fano, Denmark, on Sept. 6th, 1913. Recovered near Cardiff, Glamorganshire, on Jan. 17th, 1914.

TUFTED DUCK (*Nyroca fuligula*).—Palmen, Helsingfors, No. 358, marked at Kobbatslintar, near Mariehawn, Aland Archipelago, south-west Finland, on July 13th, 1913. Reported by Mr. N. H. Foster on Lough Neagh, co. Armagh, on Dec. 31st, 1913.

LAPWING (*Vanellus vanellus*).—Leiden No. 3330, nestling, marked at Egmond, province North Holland, on June 15th, 1913. Reported by Mr. C. Tangye in the *Birmingham Mail* at Knowle, Warwickshire, on Dec. 25th, 1913.

BLACK-HEADED GULLS (*Larus ridibundus*).—Rossitten, No. E19764, nestling, marked near Wallnau, Fehmarn Islands, Prussia, on July 11th, 1913. Reported by Mr. G. Woodwark at King's Lynn, Norfolk, on Dec. 26th, 1913.

Rossitten, No. 11201, marked at Rossitten, north Germany, on July 18th, 1912. Reported by the Rev. J. R. Hale at Thurnham, Maidstone, on Jan. 3rd, 1914.

Rossitten, No. 20075E, nestling, marked near Lubeck, Schleswig-Holstein, on June 25th, 1913. Reported by Mr. E. Foster at Sittingbourne, Kent, on Jan. 27th, 1914.

Rossitten, No. 17795E, nestling, marked near Wendisch-Langendorf, Pomerania, on June 29th, 1913. Reported by Dr. B. B. Riviere at Breydon, Norfolk, on Feb. 14th, 1914.

Rossitten, No. 18224E, marked near Lübeck, Schleswig-Holstein, on June 21st, 1913. Reported in the *People* as recovered near Portsmouth, Hampshire, about Feb. 1st, 1914.

Leiden No. 13621, nestling, marked on Texel Island, north Holland, on June 22nd, 1913. Reported in the *People* as recovered near Chingford, Essex, on Jan. 31st, 1914.

Heligoland, No. ?, nestling, marked in Schleswig-Holstein on July 7th, 1913. Reported by Mrs. A. G. Peirse-Duncombe at Woodton, Norfolk, on Jan. 14th, 1914.

NOTES

RECOVERY OF MARKED STARLINGS.

SINCE my last note on the recovery of Starlings marked at Bradfield, Berkshire (*Brit. Birds*, VI., p. 13), twenty-five captures have to be recorded. Only two of these occurred abroad, or indeed more than five miles from the place where they were ringed, viz. :—

B.B. 31, marked on Jan. 16th, 1911. Was shot at Oudkerk, Friesland, Netherlands, on Feb. 9th, 1914. Reported by H. van Baerdt van Sminia.

B.B. 16196, marked on Jan. 29th, 1912. Was recovered at Dorfe Flinkow, near Stolp, Pomerania, on March 8th, 1914. It had become entangled with another bird in a nesting-box, and falling to the ground, was killed. Reported by Mr. Stahl.

The following records of birds recovered at or very near the place where marked, add further evidence that some Starlings are strictly resident :—

B.B. 11419. Marked on Jan. 12th, 1911; caught and again released on Feb. 2nd, 1912; killed June 20th, 1912.

B.B. 15798. Marked on Dec. 28th, 1911; killed Sept. 1st, 1912.

B.B. 15863. Marked Dec. 25th, 1911; caught and again released June 10th, 1913.

B.B. 15725. Marked Dec. 28th, 1911; caught on its nest and again released May 28th, 1912.

B.B. 15834. Marked Jan. 1st, 1912; caught and again released June 18th, 1913.

It is probable that these were birds bred in the district.

The following young birds in their first plumage, and presumably from the very close neighbourhood, were caught in the trap in June and July, and were recovered some months after close by :—

B.B. 14956. Marked June 19th, 1911. Shot middle of Nov., 1913.

B.B. 19835. Marked July 27th, 1912. Found dead one mile away, May 20th, 1913.

Besides these, two young birds marked in June, 1913, were shot at the same place in the middle of November of the same year.

Unfortunately, on account of pressure of work, I have been unable to set the trap this year, and only ringed forty-six Starlings during the winter of 1912-13. Nor was I as successful as in former years in capturing birds when the trap was set. This was partly due to the mild weather, and partly, I think, to the fact that the trap was often left unattended for too long, so that many birds learnt their way out.

NORMAN H. JOY.

UNUSUAL SPRING-IMMIGRATION OF STARLINGS.

ON March 10th and 11th, 1914, there was a sharp fall of temperature both in England and on the Continent, with six degrees of frost in Norfolk accompanied by sleet. *The Times* weather reports showed a drop of 13 degrees in the minimum temperature at Paris and Berlin, and altogether it was a state of things which might be expected to have its effect on birds somewhere.

Accordingly, early in the morning of the 11th (about 6.45 a.m.), an extraordinary flight of small birds arrived on our Norfolk coast, where they were seen passing over Gorleston, next Yarmouth, by Mr. William Hardy and other persons. They had evidently just come in from the sea, and when viewed were travelling at a height of about three hundred feet in a westerly direction—i.e. almost straight inland, against a gentle wind blowing from the west (registered W., force 2).

So numerous were the birds—which there is little doubt were Starlings—a species which has greatly increased in Norfolk in the last thirty years—that the entire flock extended, with some interruptions, for a mile and a half. Nor is there likely to be in this any exaggeration, for another witness, Mr. W. Cope, who happened to be on the shore and saw in the distance what was presumably the same flock, told Mr. Arthur Paterson that it reminded him of the trail of smoke coming from a steamer on a still morning. On the same day Mr. James Vincent, who was pike-fishing on Horsey Broad, which is twelve miles from Gorleston and one and a half from the coast at its nearest point, saw some big flocks of birds which he at once identified as Starlings: these were also coming from the direction of the sea and were going west.

Two days previously—i.e. March 9th—Mr. Vincent had made a note of a big migration of Starlings, viz. from five to ten thousand, coming in from the sea and flying west against a slight wind (registered at Yarmouth as West, force 2). At the same time he saw about one thousand Chaf-

finches, about five hundred Bramblings in two flocks, and about fifty Meadow-Pipits, all going in the same direction.

This is not the first occasion in which a spring-migration of Starlings in large numbers has been observed in the neighbourhood of Yarmouth (see *Zoologist*, 1901, pp. 126-27), but then they were going north-east or north-west. On the present occasion the movement was due west, which if persevered in would have taken the birds to Wales, which could hardly have been their destination. It is to be presumed that the presence of these Starlings was due to the sudden change of weather on the Continent, the severity of which might cause many birds to shift their quarters, but that would not account for the unusual direction of their flight. This must have been owing to the wind, which was from the west, and against which they were flying.

It was in some ways an anomalous movement, but a similar one took place in Norfolk in the spring of 1883 (see *The Migration Reports*, Fifth Report, 1883, p. 57). At various dates between February 11th and May 8th of that year, Starlings, Rooks, Sky-Larks, and other birds were scheduled as going west at the following stations on the Norfolk coast—Leman and Ower Lightship, Outer Dowsing Lightship, Newarp Lightship, Cockle Lightship, and Lynn Well.

J. H. GURNEY.

[The movement seems to be quite comparable to the ordinary winter "weather-migrations" except that it occurred at an unusual time and when the birds should normally have been travelling in the opposite direction, and suggests that the birds were some of our usual passage-migrants that had already reached the Continent but were forced by the weather-conditions to return. It seems quite unnecessary to suppose that either the direction or force of the wind can have had anything to do with the direction in which the birds were flying. A wind of force 2 can hardly, on any theory, have any effect on the flight of a Starling.—N.F.T.]

BREEDING-HABITS OF THE RAVEN.

THE Raven (*Corvus c. corax*) commences to incubate as soon as the first egg has been deposited; as I suggested (*Brit. Birds*, IV., p. 141), many eggs of this species would be rendered infertile by frost and snow if the bird completed her clutch before commencing to sit. The following observations made by me this year, bearing on the point, are, I think, of interest :—

March 29th, nest held six eggs; 30th, not visited; 31st, two young, four eggs; the young differed in size and no doubt

one had hatched on the 30th. April 1st, three young, three eggs; 2nd, four young, two eggs; 3rd, four young, two eggs; 4th, five young, remaining egg infertile.

There is no doubt that the incubation period in many cases will have to be revised, for it has been worked out on the assumption that incubation started with the laying of the last egg, whereas in reality in a great number of species it commences with the deposition of the first.

ERIC B. DUNLOP.

BRAMBLING IN LONDON.

On April 4th, 1914, I saw a Brambling (*Fringilla montifringilla*) in Kensington Gardens. It was feeding on the ground under some plane trees. I know the bird well, and saw the white rump distinctly as it flew away.

D. EARDLEY-BEECHAM.

NUTHATCH IN SOUTH-WEST CORNWALL.

ON January 7th, 1914, at Bonython, Cury, half way from Helston to the Lizard, I saw a Nuthatch (*Sitta e. britannica*). The *Hand-List of British Birds* describes this species as rare in west Cornwall and "very rare or unknown extreme south-west Cornwall." This cannot be merely due to the absence of large trees, for parts of the Lizard Peninsula are quite well wooded, and I found that Green Woodpeckers were decidedly abundant and Great Spotted Woodpeckers not uncommon. In the extensive woods round the Helford River, moreover, there seemed to be quite a remarkable number of Marsh-Tits (*Parus p. dresseri*), but I did not find any Willow-Tits (*P. a. kleinschmidtii*) with them. The occurrence of any species in mid-winter is, I am aware, no evidence of its status as a breeding-species, but these notes on species considered to be mainly sedentary may have some value.

H. G. ALEXANDER.

[In the latest account of the birds of Cornwall by Prof. J. Clark (*Vict. Hist. of the County of Cornwall*, I., p. 332), the Nuthatch is said to breed "regularly as far west as Doublebois, in most years about Bodmin, and occasionally about Falmouth: has nested twice at Helston; common in the middle and west as a winter visitor." It will be seen that this account differs considerably from the account given in Rodd's *Birds of Cornwall*, where it is said to be "almost unknown" in the neighbourhood of Penzance.—F.C.R.J.]

INCURSION OF WAXWINGS.

RUTLANDSHIRE.—Two were seen by Sir Arthur Fludyer on Jan. 19th, 1914, at Whissendine (*Uppingham School Ornithological Report for 1913*, p. 11).

NORFOLK.—Mr. Gurney wrote on April 3rd that he had seen a Waxwing the day before near Norwich.

ESSEX.—One near Southend on Dec. 11th; two near Leigh, one on Jan. 6th, the other a few days later; one at Westcliff on March 24th and 26th (A. Smith).

BERKSHIRE.—One at Bradfield on March 2nd (N. H. Joy). Two at Boyn Hill, Maidenhead, at the end of February (M. D. Haviland).

SUSSEX.—A male and two females at Brede, January 22nd. Three females, Winchelsea, January 24th and February 2nd. A pair at Sewer's Bridge, Pevensey Marsh, February 1st (N.F.T.).

ABROAD.—Mr. W. H. St. Quintin writes that Dr. Siepi of the Marseilles Museum has sent him particulars of two Waxwings "which were killed, one on the 7th January, 1914, the other about a week earlier, in the district of the Sainte-Baume, some twenty-five miles east of Marseilles. In a postscript Dr. Siepi adds that three others were killed this winter, two of them out of a flock of seven, also in the Department of Bouches du Rhone. I also was told of four others which were killed in the neighbourhood of Hyères, one of which I saw was labelled 13 December 1913."

Mr. Seton Gordon also tells us of their appearance near Aups in the province of Var in January, and of a flock near Orleans.

MISTLE-THRUSH'S NEST BUILT OF LACE.

It may be of interest to record that a nest built by a Mistle-Thrush (*Turdus v. viscivorus*), in a tree close to a very busy road in the middle of Nottingham and about thirty yards from a large lace factory, is made entirely of strips of waste lace, some of which hangs dangling from it. The bird is now sitting.

T. L. BRADLEY.

REDWING SINGING IN ENGLAND.

WITH reference to the note on page 322 as to whether the Redwing ever sings its *full* song in England, this can, I think, only be settled when someone accustomed to its song in its breeding-haunts hears this song in England. I, too, have heard the cheery twitter of the Redwing in England, and always associate this with an ideal spring-day in March at Madson in Cornwall where, amongst a few Redwings sitting on a high tree, one evidently was expressing its joy for the

sunshine by its warbling. I spent a breeding-season at a spot south of Drontheim in Norway where the Redwing was quite numerous, and where its very distinctive "leery, leery" notes could be heard all round. I am not aware that these characteristic notes, which are part of the full song, have ever been heard in England.

WILLIAM SERLE.

A PAIR OF ROBINS BUILDING MANY NESTS.

IN Volume V., p. 132, I recorded the fact that a pair of Robins (*Dandalus r. melophilus*) had built, in 1911, twenty-three incomplete nests in a stack of pipes. In 1913 the Robins returned to the pipes and again started several nests, but did not use one. This year they have done the same again, but now one pipe has a completed nest containing hard-set eggs.

J. H. OWEN.

HOOPOE IN STAFFORDSHIRE.

ON April 16th, 1914, a Hoopoe (*Upupa e. epops*) paid a short visit to the lawn of Trentham Vicarage.

W. WELLS BLADEN.

INCUBATION-PERIOD OF PEREGRINE FALCON.

A PEREGRINE'S egg hatches in twenty-eight days, and only rarely does real incubation start with any number of eggs short of a full clutch. This I have proved from having known all the eggs of different clutches hatch out on the same day. It is true, of course, that one of the Peregrines often covers, or half-covers, the first and succeeding eggs deposited, but it is seldom that "sitting" is then of sufficient duration to "turn" them. Naturally, however, when the occasion does arise that incubation really commences with any number of eggs short of the full clutch, a few days longer, so far as touches the "sitter," must be allowed for the hatching of one or some of the eggs. As to the number of the "few days," that, of course, entirely depends on as to when exactly real "sitting" started, as well as—even then—on the interval between the laying of each egg. Usually this interval is two days (i.e. forty-eight hours), but rarely it extends to three, and very rarely to four, days. But this three and four days generally only applies to the interval between the depositing of two eggs of a "set,"

usually occurring (when it occurs at all) between the second and third, or third and fourth. That eyasses of any eyrie are of different sizes, even at a very tender age, simply takes origin from the fact that female Peregrines—almost from the hour of hatching—are universally larger than the males, as (but this, of course, is well known) is invariably the case with the adults. Even in the case of incubation starting and continuing with the first and succeeding eggs laid, all but the last—we will suppose—holding males, then the “falcon” eyass, although hatched several days after the tiercels, would still soon outgrow them. Male Peregrines certainly preponderate: this is proved from female eyasses being in the minority, as well as from the fact that more unmated adult tiercels are met with than falcons. It would be interesting to know if the biggest eggs produce females. This I mean to find out some day. J. WALPOLE-BOND.

SPOONBILL IN CHESHIRE.

MR. JOHN A. DOCKRAY informs me that a Spoonbill (*Platalea l. leucorodia*) was shot on November 16th, 1913, on Burton Marsh, on the east side of the Dee Estuary, partly in the county of Cheshire and partly in Flintshire. He has sent me a photograph of the bird taken soon after it was shot: it is a fine specimen, but rather damaged about the head and neck. Messrs. Coward and Oldham, in their work on the *Fauna of Cheshire*, Vol. I., p. 310, only refer to two or possibly three records from the county—one on Tatton Mere about the middle of the last century, and one on the Dee Marshes near Burton (the same locality as the present specimen), of which the date is variously given as 1859 and 1864. Mr. H. E. Forrest (*Fauna of N. Wales*, p. 261) also refers to the latter records. F. C. R. JOURDAIN.

SMEW INLAND NEAR EDINBURGH.

AN adult male Smew (*Mergus albellus*) in perfect plumage appeared on Duddingston Loch on March 20th, 1914, and has been there for a considerable time each day until to-day, the 29th. It has done all its feeding in shallow water within an area of about twenty square yards. It has rested mostly on a stone standing in the water, and sometimes on a nest that a Coot is busy building. This is the first Smew that I have seen on the loch during a residence of eleven years. The loch is within the city boundaries and near Holyrood Palace. WILLIAM SERLE.

BLACK TERNS IN CHESHIRE.

THE Black Tern (*Hydrochelidon n. nigra*) has, I understand, been seen on the Cheshire meres with some degree of regularity during the last few years on both spring and autumn migrations, but it has not been seen in any numbers on these occasions—usually one or two, or possibly five individuals being observed at one time. On April 18th, 1914, I counted twenty (and there were probably at least twenty-five) in full summer-plumage, engaged in catching flies over Redesmere, near Alderley, Cheshire.

Mr. A. W. Boyd tells me that on the same afternoon he saw one (in company with a Common or Arctic Tern) at Witton Flashes, a salt subsidence. at Northwich. On April 19th, none was to be seen at Redesmere or Northwich, when I visited these places with Mr. Boyd.

E. A. EASON, Jun.

SPOTTED CRAKE IN WINTER IN
GLOUCESTERSHIRE.

ON January 28th, 1914, my brother, H. V. Charlton, observed a Spotted Crake (*Porzana porzana*) which rose from beneath his feet by a small stream at Netherswell, Stow-on-the-Wold, Gloucestershire.

J. M. CHARLTON.

OCCURRENCES OF RARE BIRDS IN SCOTLAND.—The following interesting records have been published in recent issues of the *Scottish Naturalist*. All the references given refer to the volume for 1914.

GOLDEN ORIOLE (*Oriolus o. oriolus*).—In “spring,” 1913, at Fair Isle (W. E. Clarke, p. 55).

GREENLAND REDPOLL (*Carduelis l. rostrata*).—A male on Sept. 12th, 1913, and a female on the 27th, at Tiree, Inner Hebrides (A. C. Jackson, p. 44). In “autumn,” 1913, at Fair Isle (W. E. Clarke, p. 55).

SCARLET GROSBEAK (*Carpodacus erythrinus*).—“Several” were seen between Aug. 29th and Sept. 18th, 1913 (all females or young males) at Fair Isle (*id.*, p. 54).

ORTOLAN BUNTING (*Emberiza hortulana*).—In “spring” and “autumn” 1913, at Fair Isle (*id.*, p. 55).

RUSTIC-BUNTING (*E. rustica*).—An adult male on May 30th, 1913, at Fair Isle (*id.*, p. 54).

LITTLE BUNTING (*E. pusilla*).—In “autumn,” 1913, at Fair Isle (*id.*, p. 55).

GREY-HEADED WAGTAIL (*Motacilla f. thunbergi*).—In “spring,” 1913, at Fair Isle (*id.*, l.c.).

NORTHERN TREE-CREEPER (*Certhia f. familiaris*).—A female on April 14th, 1913, at Fair Isle, the second authentic record of this race (*id.*, p. 54).

LESSER GREY SHRIKE (*Lanius minor*).—An adult female on June 3rd, 1913, at Fair Isle: the first for Scotland (*id.*, *l.c.*).

GREAT GREY SHRIKE (*L. e. excubitor*).—One seen on Feb. 22nd and 26th, 1914, at Lerwick, Shetland (J. S. Tulloch, p. 94).

WOODCHAT-SHRIKE (*L. s. senator*).—An adult male on June 6th, 1913, at Auskerri, Orkney (H. Laidlaw, p. 45). An adult female on June 4th, 1913, at Fair Isle (W. E. Clarke, p. 54).

SIBERIAN CHIFFCHAFF (*Phylloscopus c. tristis*).—One on Oct. 25th, 1913, another on the 26th, and one on Dec. 27th, near Lerwick, Shetland (G. W. Russell, pp. 44 and 93). In "autumn" 1913, at Fair Isle (W. E. Clarke, p. 55).

WOOD-WARBLER (*Ph. s. sibilatrix*).—One on May 4th, 1913, near Lerwick, Shetland (G. W. Russell, p. 44). In "spring" 1913, at Fair Isle (W. E. Clarke, p. 55).

EVERSMANN'S WARBLER (*Ph. b. borealis*).—One on Oct. 18th, 1913, at Fair Isle—the third record for the occurrence of this bird in the British Isles (*id.*, p. 54).

YELLOW-BROWED WARBLER (*Ph. s. superciliosus*).—In "autumn," 1913, at Fair Isle (*id.*, p. 55). A bird watched on October 15th, 1913, at Lauder (Berwickshire) was identified as being of this species, "familiar from book plate and mounted specimen." Its note is described as a plaintive "weet, weet," "a nervous and insistent note" (W. McConachie, p. 68).

GRASSHOPPER-WARBLER (*Locustella n. nevii*).—In "spring," 1913, at Fair Isle (W. E. Clarke, p. 55).

MARSH-WARBLER (*Acrocephalus palustris*).—One on June 7th, 1913, at Fair Isle (*id.*, p. 54).

SEDGE-WARBLER (*A. schænobaenus*).—One on May 31st, 1913, near Lerwick, Shetland (G. W. Russell, p. 44).

ICTERINE WARBLER (*Hypolais icterina*).—One on May 26th, 1913, at Fair Isle (W. E. Clarke, p. 54).

BARRED WARBLER (*Sylvia n. nisoria*).—A female on Sept. 9th, 1913, on Tiree (A. C. Jackson, p. 44). One on Sept. 19th, 1913, near Lerwick, Shetland (G. W. Russell, *l.c.*). In "autumn," 1913, at Fair Isle (W. E. Clarke, p. 55).

GARDEN WARBLER (*S. borin*).—One on Oct. 26th, 1913, near Lerwick, Shetland (G. W. Russell, p. 44).

BLACK REDSTART (*Phœnicurus o. gibraltariensis*).—In "spring" and "autumn," 1913, at Fair Isle (W. E. Clarke, p. 55).

BLUETHROAT (*Luscinia svecica* ? subsp.).—In "spring" and "autumn," 1913, at Fair Isle (*id.*, *l.c.*).

WHITE-SPOTTED BLUETHROAT (*L. s. cyanecula*).—An adult male on May 9th, 1913, at Fair Isle (*id.*, p. 54).

HOBBY (*Falco s. subbuteo*).—An adult male on May 7th, 1913, at Fair Isle (*id.*, p. 55).

SPARROW-HAWK (*Accipiter n. nisus*).—One obtained on Oct. 12th, 1913, near Lerwick, Shetland, and one seen in the same locality in Nov.,

1910, for about a month (G. W. Russell, p. 44). An adult female on May 12th, 1913, at Fair Isle (W. E. Clarke, p. 55).

BEAN-GOOSE (*Anser f. fabalis*).—One on Jan. 10th, 1913, at Fair Isle (*id.*, *l.c.*).

PINTAIL (*Dafila acuta*).—A nest was found in June, 1913, in the Moray area (A. C. Jackson, p. 45).

SMEW (*Mergus albellus*).—An adult female on Jan. 21st, 1913, at Fair Isle (W. E. Clarke, p. 55).

GREAT CRESTED GREBE (*Colymbus c. cristatus*).—A pair frequented a loch in the Moray area in the summer of 1912, but no nest was found. In 1913 a pair again frequented the same loch and a nest with one egg which had been sucked was found in May. The birds nested again and a young one was hatched in July. The Great Crested Grebe has not previously been recorded as nesting north of Perthshire (A. C. Jackson, p. 46).

STONE-CURLEW (*Burhinus a. oedicnemus*).—An adult female on June 7th, 1913, at Fair Isle—only twice before recorded from Scotland (W. E. Clarke, p. 55).

RUFF (*Machetes pugnax*).—A male on Sept. 25th, 1912, on Baleshare (Outer Hebrides) (W. A. Gray, p. 69).

TEMMINCK'S STINT (*Erolia temminckii*).—A female on May 13th, 1913, at Fair Isle (W. E. Clarke, p. 55).

BAR-TAILED GODWIT (*Limosa l. lapponica*).—One on May 20th, 1913, at Fair Isle (*id.*, *l.c.*).

WHIMBREL (*Numenius ph. phaeopus*).—A pair shot from a flock of Curlews near Cramond (Forth) on Jan. 28th, 1914 (B. Campbell, p. 95).

UNUSUAL WINTER-MIGRATION OF WOODCOCK.—In reference to the note on this subject (*antea*, p. 324), Mr. E. W. Wade writes that some of his friends are challenging the statement that eighty or ninety were shot on Scarborough racecourse in two days. He finds that the true version is that this number was shot there *during the season*.

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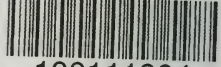
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